

Access DB# 14182

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: JANIS DOTE Examiner #: 65274 Date: 3/4/05  
Art Unit: 1756 Phone Number 301-757-1362 Serial Number: 101775,429  
Mail Box and Bldg/Room Location: 9015 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Gigaphotoreceptors with azene-based compounds

Inventors (please provide full names): MUSRAHA Subran; Zbigniew Jakowski;  
Kam Law

Earliest Priority Filing Date: 4/20/03

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please search compounds in attached  
claims 21-27.*

*Examples of compounds from specification  
are also attached*

SCIENTIFIC REFERENCE  
Sci & Tech Ref. Sec.

MAR 4 11

Pat. & T.M. Office

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Whe</u>	NA Sequence (#) _____	STN <u>371,93</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>1</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>3/14/05</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>3/14/05</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>60</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>30</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>150</u>	Other _____	Other (specify) _____



# **STIC Search Report**

## **EIC 1700**

**STIC Database Tracking Number: 146821**

**TO: Janis Dote**  
**Location: Rem9C75**  
**Art Unit : 1756**  
**March 14, 2005**

**Case Serial Number: 10/775429**

**From: Usha Shrestha**  
**Location: EIC 1700**  
**REMSEN 4B28**  
**Phone: 571/272-3519**  
**usha.shrestha@uspto.gov**

### **Search Notes**

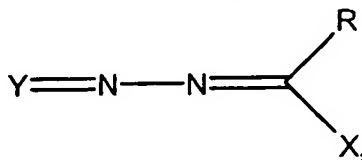
1           17.    An electrophotographic imaging process according to claim 15 wherein  
2   the solubilizing substituent comprises a  $-C(=O)O-R_5$  group where  $R_5$  is an alkyl group, an  
3   alkenyl group, or an aromatic group.

1           18.    An electrophotographic imaging process according to claim 15 wherein  
2   the 9-fluorenylidene group further comprises at least a substituent selected from the  
3   group consisting of a halogen, a  $NO_2$  group, a cyano group, a hydroxyl group, a thiol  
4   group, a carboxyl group, an amine group, an ester group, an alkyl group, an alkoxy  
5   group, an alkenyl group, and an aromatic group.

1           19.    An electrophotographic imaging process according to claim 15 wherein  
2   the photoconductive element further comprises a second charge transport material.

1           20.    An electrophotographic imaging process according to claim 19 wherein  
2   the second charge transport material comprises an electron transport compound.

1           21.    A charge transport material having the following formula,



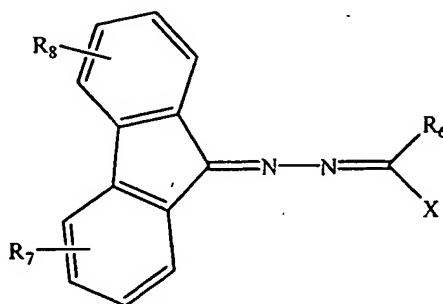
2  
3           where R comprises a hydrogen, an alkyl group, an alkenyl group, a heterocyclic  
4   group, or an aromatic group; X comprises an arylamine group; and Y comprises a 9-  
5   fluorenylidene group having at least a solubilizing substituent, wherein the solubilizing  
6   substituent comprises a  $-(CH_2)_nH$  group where n is an integer between 1 and 50, and one  
7   or more of the methylene groups is optionally replaced by O, S, N, C, B, Si, P,  $C=O$ ,  
8    $O=S=O$ , a heterocyclic group, an aromatic group, an  $NR_a$  group, a  $CR_b$  group, a  $CR_cR_d$   
9   group, or a  $SiR_eR_f$  where  $R_a$ ,  $R_b$ ,  $R_c$ ,  $R_d$ ,  $R_e$ , and  $R_f$  are, each independently, a bond, H, a  
10   hydroxyl group, a thiol group, a carboxyl group, an amino group, an alkyl group, an  
11   alkoxy group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring  
12   group.

22. A charge transport material according to claim 21 wherein X comprises a p-(N,N-disubstituted)arylamine group, a carbazole group, or a julolidine group.

23. A charge transport material according to claim 21 wherein the solubilizing substituent comprises a  $-C(=O)O-R_5$  group where  $R_5$  is an alkyl group, an alkenyl group, or an aromatic group.

24. A charge transport material according to claim 21 wherein the 9-fluorenylidene group further comprises at least a substituent selected from the group consisting of a halogen, a  $NO_2$  group, a cyano group, a hydroxyl group, a thiol group, a carboxyl group, an amine group, an ester group, an alkyl group, an alkoxy group, an alkenyl group, and an aromatic group.

25. A charge transport material according to claim 21 wherein the charge transport material has formula:



where  $R_6$  comprises a hydrogen, an alkyl group, an alkenyl group, a heterocyclic group, or an aromatic group;  $R_7$  comprises a  $-(CH_2)_nH$  group where  $n$  is an integer between 1 and 50, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, Si, P, C=O, O=S=O, a heterocyclic group, an aromatic group, an  $NR_a$  group, a  $CR_b$  group, a  $CR_cR_d$  group, or a  $SiR_eR_f$  where  $R_a$ ,  $R_b$ ,  $R_c$ ,  $R_d$ ,  $R_e$ , and  $R_f$  are, each independently, a bond, H, a hydroxyl group, a thiol group, a carboxyl group, an amino group, an alkyl group, an alkoxy group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group;  $R_8$  comprises a hydrogen, a halogen, a  $NO_2$  group, a cyano group, a hydroxyl group, a thiol group, a carboxyl group, an amine group,

Attorney Docket: 3216.60US02

- 13 an ester group, an alkyl group, an alkoxy group, an alkenyl group, or an aromatic group;  
14 and X comprises an arylamine group.

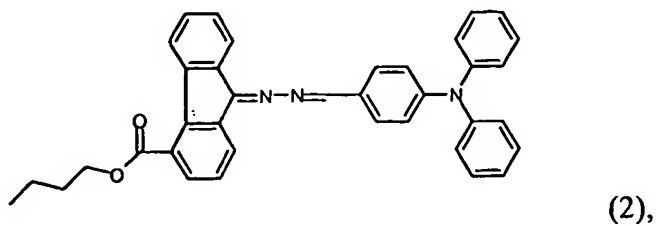
1 26. A charge transport material according to claim 25 wherein  $R_8$  is a  
2 hydrogen and  $R_7$  comprises a  $-C(=O)O-R_{13}$  group where  $R_{13}$  is an alkyl group, an alkenyl  
3 group, or an aromatic group.

1 27. A charge transport material according to claim 25 wherein X comprises a  
2 p-(N,N-disubstituted)arylamine group, a carbazole group, or a julolidine group.

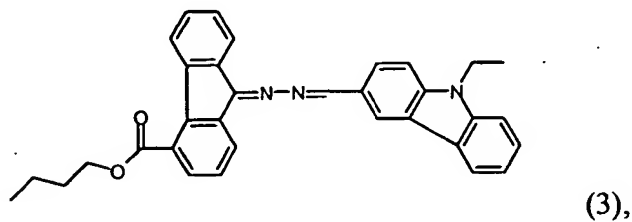
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Attorney, Docket: 3216.60US02

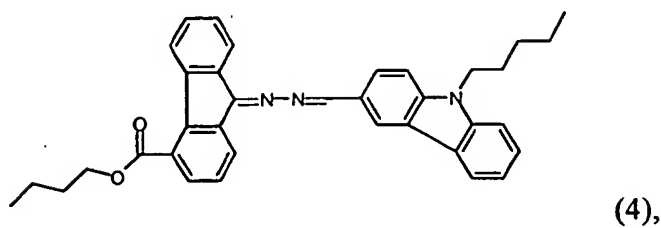
Specific, non-limiting examples of suitable charge transport materials within the general structure of the present invention have the following structures.



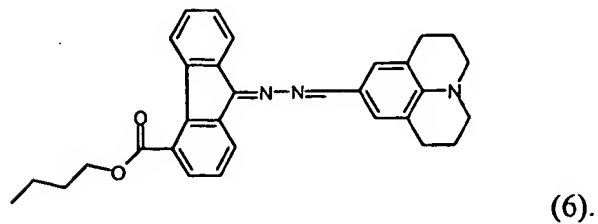
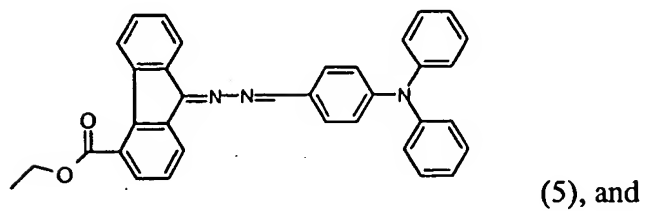
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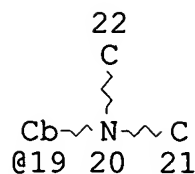
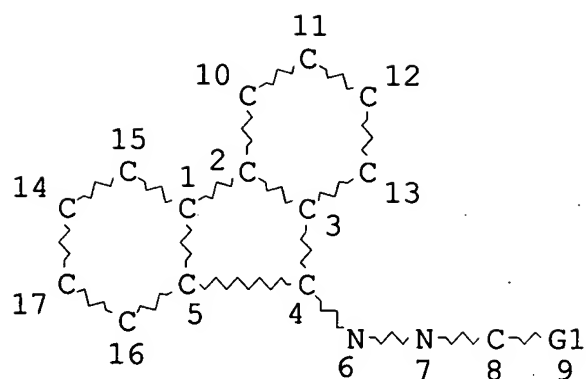
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 L11 16 S L9 AND PREP/RL  
 L12 29 S L10 OR L11  
 L13 1 S L12 AND L1

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L6 STR



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VAR G1=19/23

NODE ATTRIBUTES:

NSPEC IS RC AT 21

NSPEC IS RC AT 22

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1 N AT 23

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

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L9 37 SEA FILE=CAPLUS ABB=ON PLU=ON L8

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L12 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:1965 CAPLUS

DOCUMENT NUMBER: 142:103066

TITLE: Azine-based dimeric charge transport materials

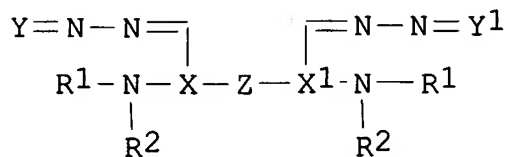
USHA SHRESTHA REM 4B28



INVENTOR(S): Tokarski, Zbigniew; Jubran, Nusrallah;  
Getautis, Vytautas; Gaidelis, Valentas;  
Daskeviciene, Maryte; Montrimas, Edmundas;  
Paulauskaite, Ingrida; Sidaravicius, Jonas  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 20 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265717	A1	20041230	US 2004-760039	2004 0116
EP 1494080	A1	20050105	EP 2004-253868	2004 0629
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2005025192	A2	20050127	JP 2004-194403	2004 0630
PRIORITY APPLN. INFO.:			US 2003-483726P	P 2003 0630
			US 2004-760039	A 2004 0116

GI



AB Improved organo photoreceptor comprises an elec. conductive substrate and a photoconductive element on the elec. conductive substrate, the photoconductive element comprising: (a) a charge transport material having the formula I (R1-4 = alkyl group, alkenyl group, aromatic group, heterocyclic group, or a part of a ring group; X and X' = aromatic group; Y and Y' = (disubstituted)methylene group; and Z is a linking group); (b) a charge generating compound; and (c) an elec. conductive substrate on which said charge transport material and said charge generating compound are located. Corresponding electrophotog. apparatuses and imaging methods are also described.

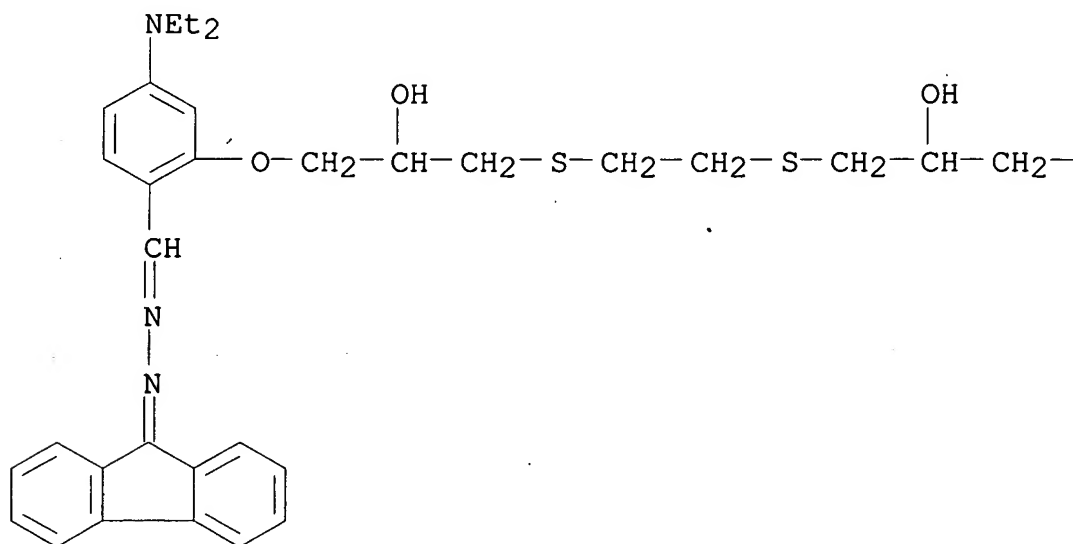
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**816463-96-4P 816463-97-5P 816463-98-6P**  
**816463-99-7P 816464-00-3P 816464-01-4P**

(azine-based dimeric charge transport materials for electrophotog.)

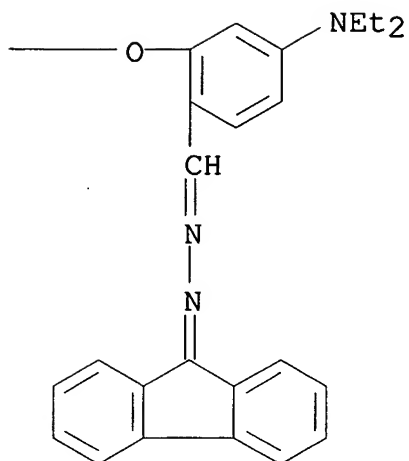
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CN Benzaldehyde, 2,2'-[1,2-ethanediylbis[thio(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluoren-9-ylidenehydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



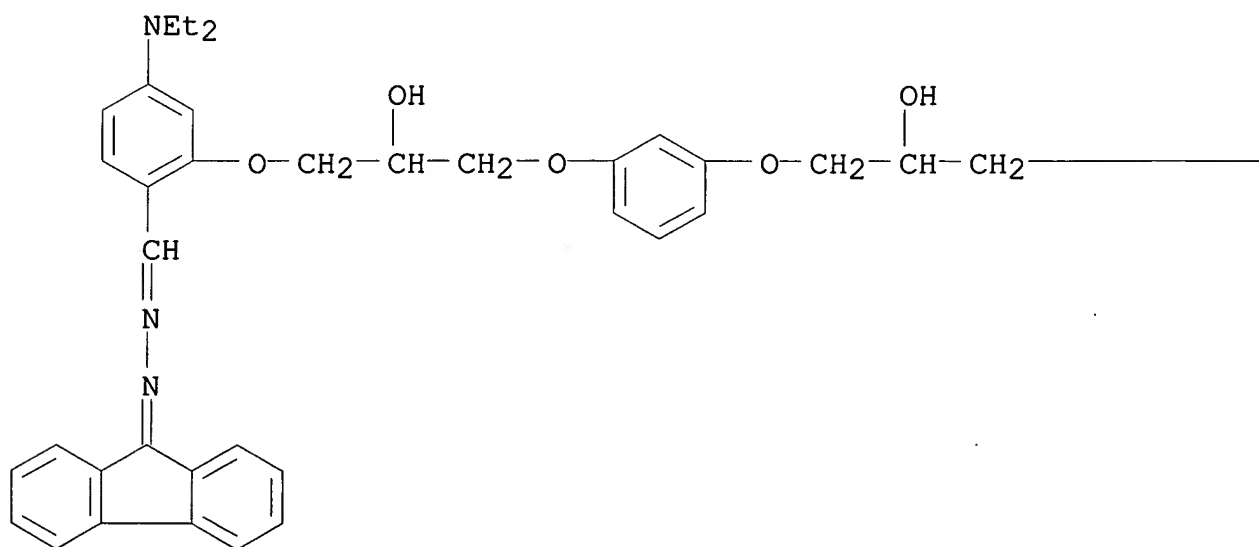
PAGE 1-B



RN 816463-94-2 CAPLUS

CN Benzaldehyde, 2,2'-[1,3-phenylenebis[oxy(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluorene-9-ylidenehydrazone) (9CI) (CA INDEX NAME)

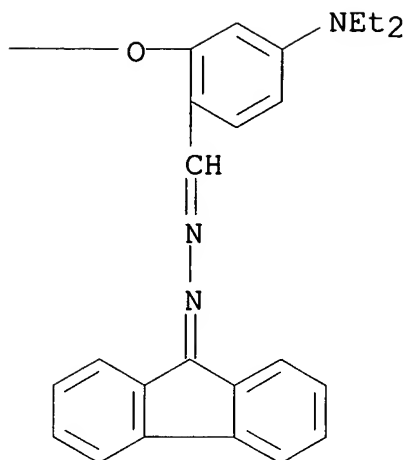
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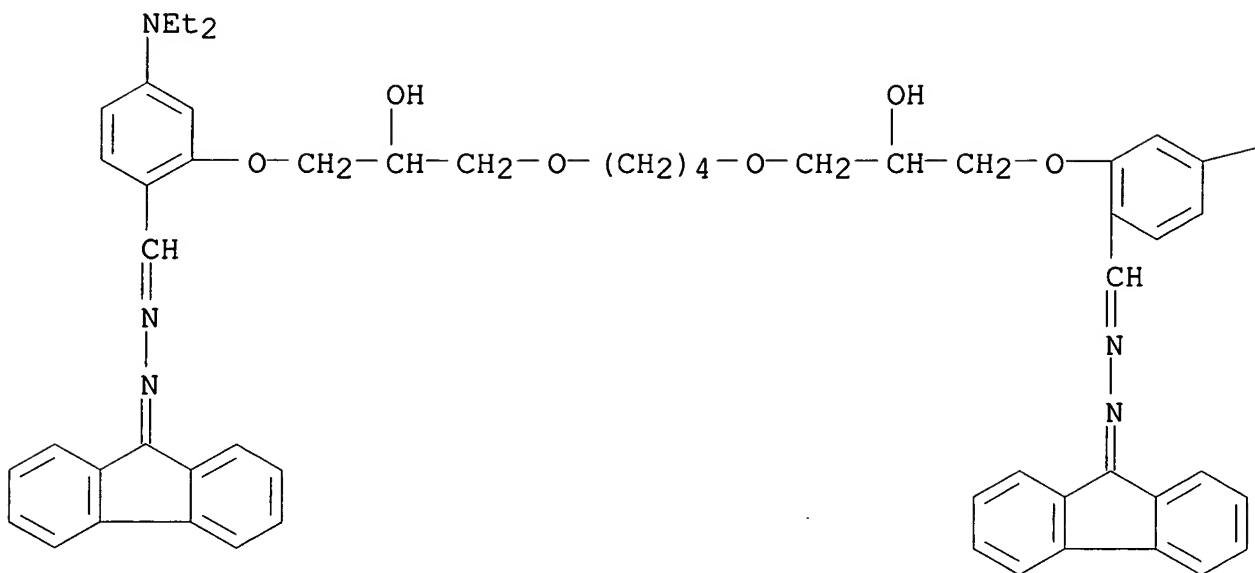
REM 4B28

PAGE 1-B



RN 816463-95-3 CAPLUS  
 CN Benzaldehyde, 2,2'-[1,4-butanediylbis[oxy(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluoren-9-ylidenehydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A

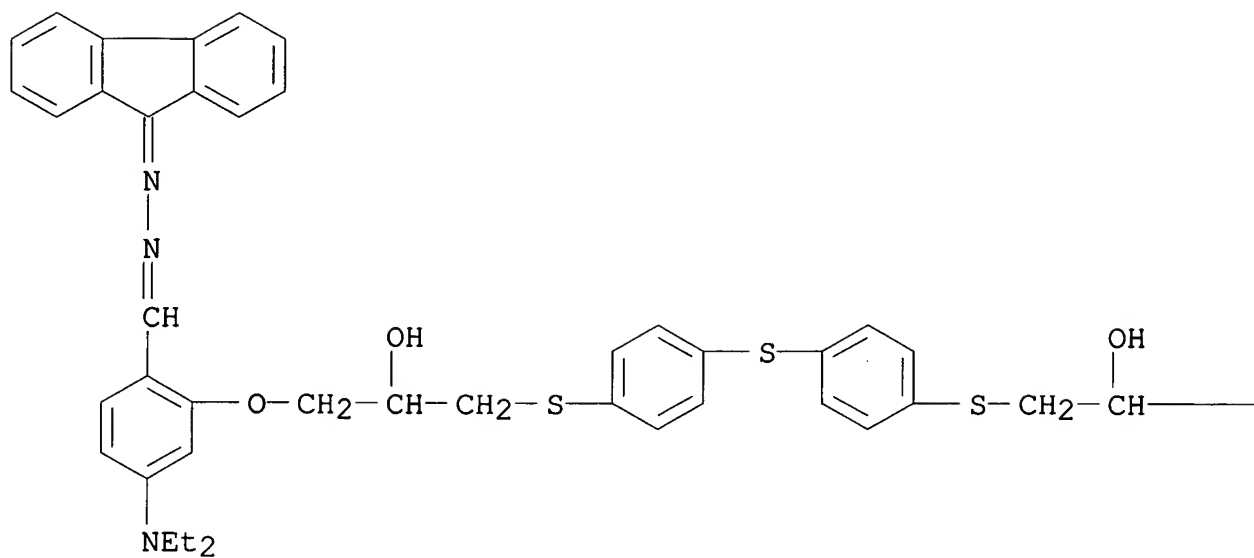


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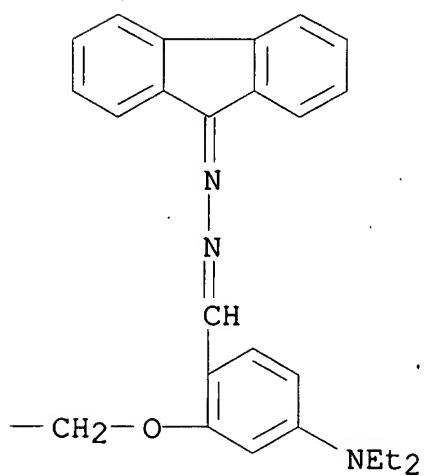
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RN 816463-96-4 CAPLUS  
 CN Benzaldehyde, 2,2'-[thiobis[4,1-phenylenethio(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluoren-9-ylidenehydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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RN 816463-97-5 CAPLUS

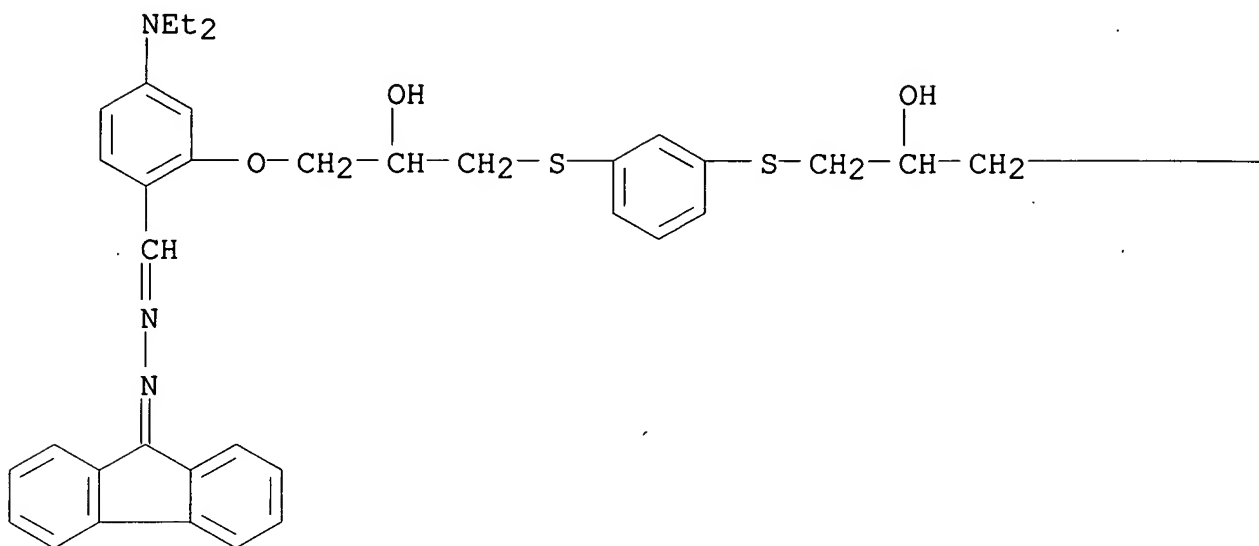
CN Benzaldehyde, 2,2'-[1,3-phenylenebis[thio(2-hydroxy-3,1-

USHA SHRESTHA

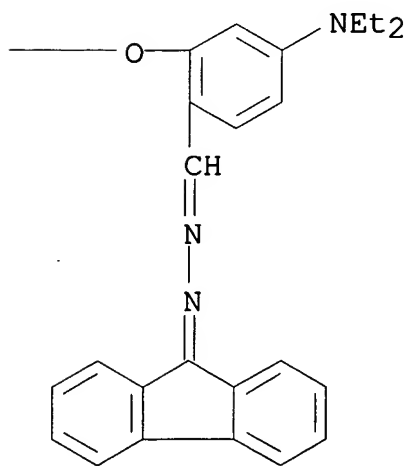
REM 4B28

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PAGE 1-A

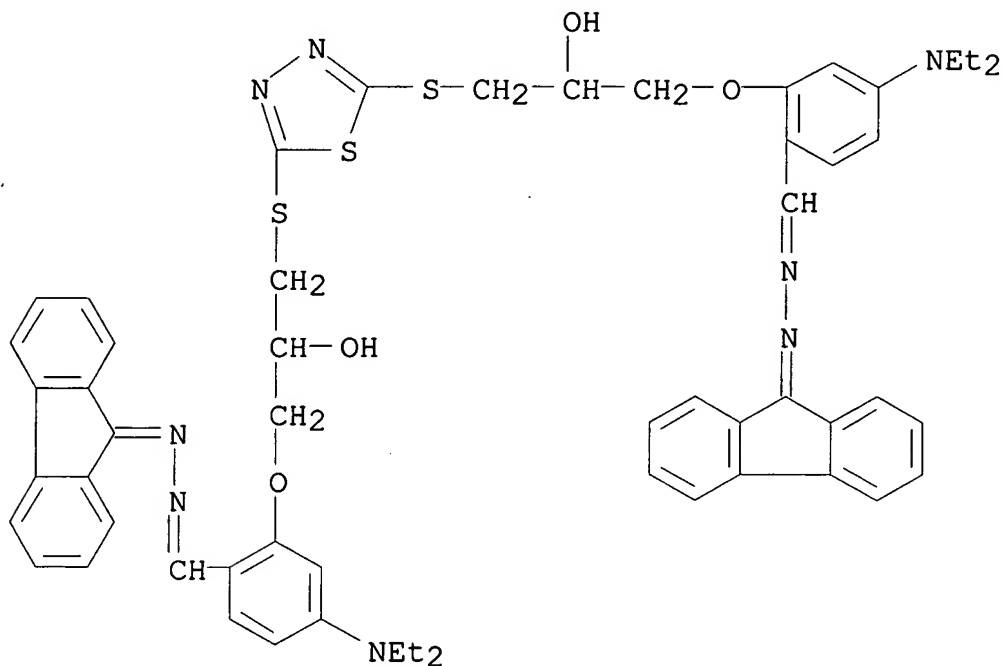


PAGE 1-B



RN 816463-98-6 CAPLUS

CN Benzaldehyde, 2,2'-[1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluoren-9-ylidenehydrazone) (9CI) (CA INDEX NAME)

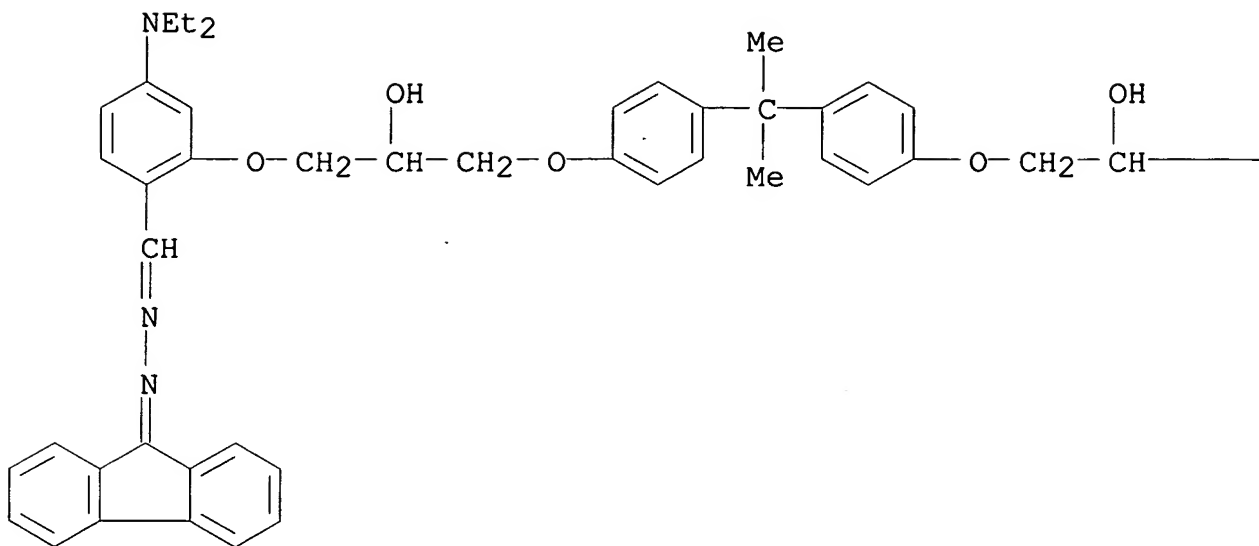


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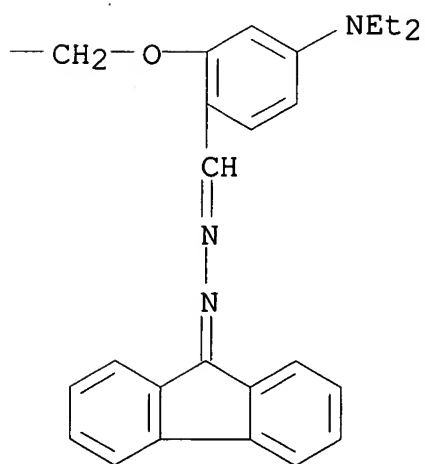
CN Benzaldehyde, 2,2'-[(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis(9H-fluoren-9-ylidenehydrazone) (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B

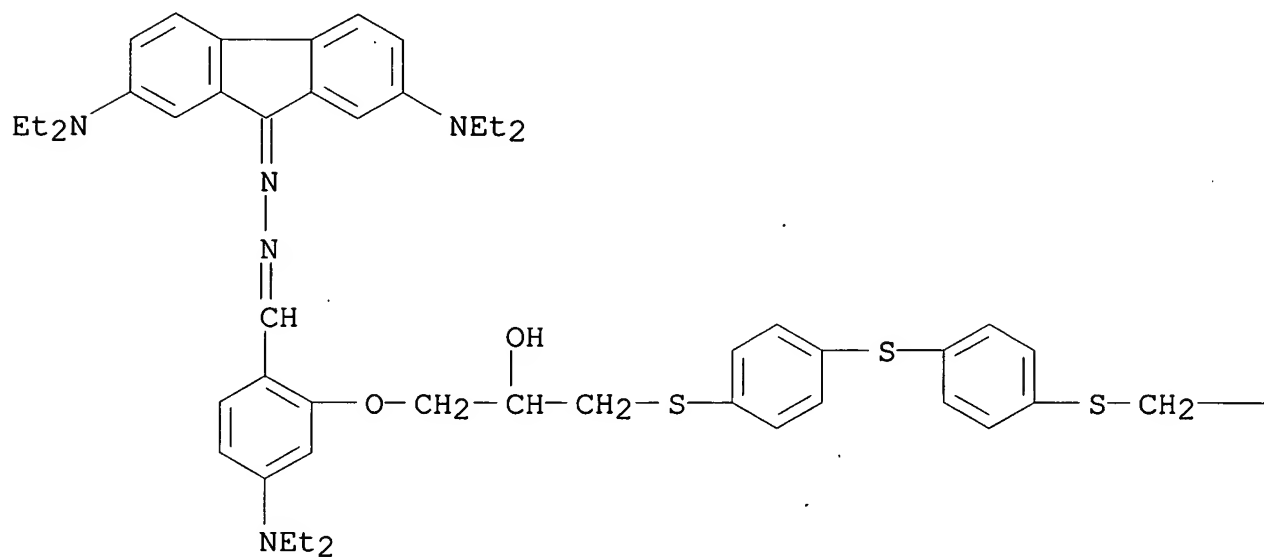


RN 816464-00-3 CAPLUS  
CN Benzaldehyde, 2,2'-[thiobis[4,1-phenylenethio(2-hydroxy-3,1-

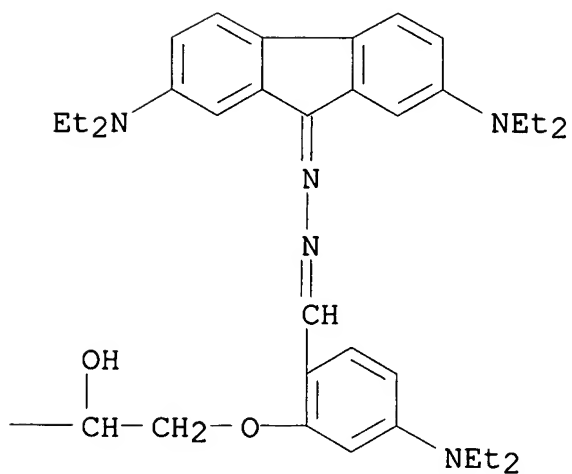
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propanediyl)oxy]]bis[4-(diethylamino)-, bis[[2,7-bis(diethylamino)-9H-fluoren-9-ylidene]hydrazone] (9CI) (CA INDEX NAME)

PAGE 1-A



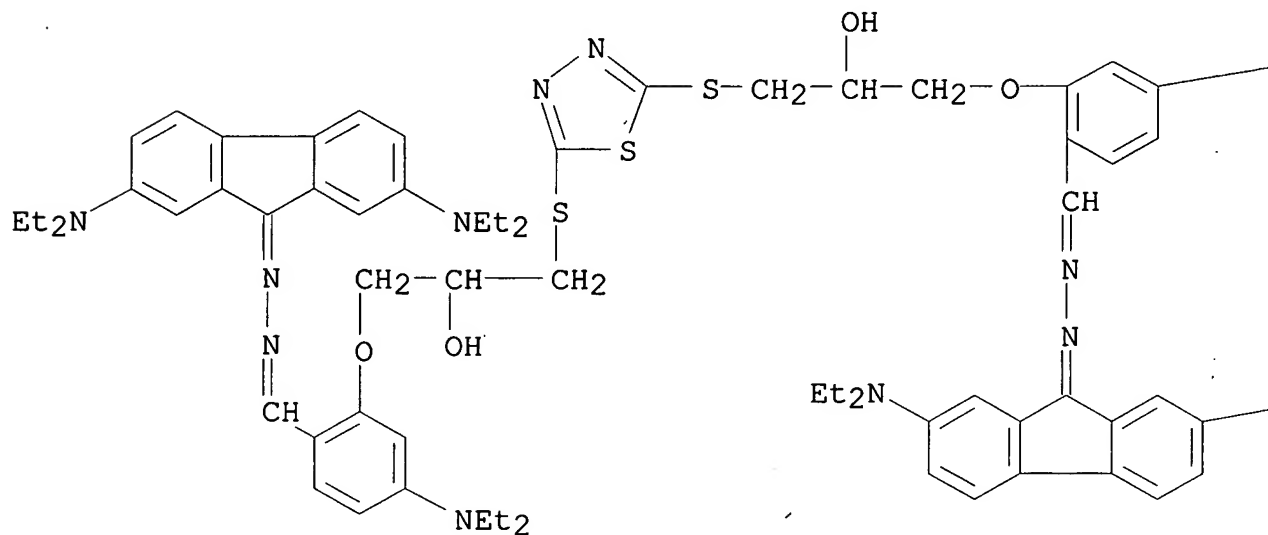
PAGE 1-B



RN 816464-01-4 CAPLUS

CN Benzaldehyde, 2,2'-[1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)oxy]]bis[4-(diethylamino)-, bis[[2,7-bis(diethylamino)-9H-fluoren-9-ylidene]hydrazone] (9CI) (CA INDEX NAME)

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—NEt<sub>2</sub>

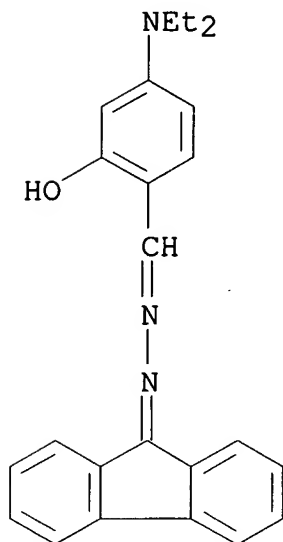
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IT 816464-03-6P 816464-04-7P 816464-07-0P

(preparation of azine-based dimeric charge transport materials for electrophotog.)

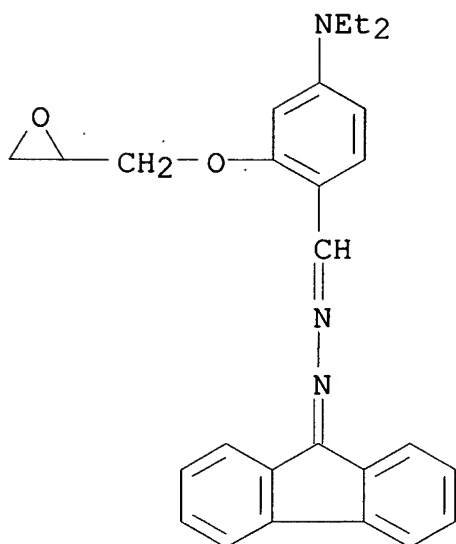
RN 816464-03-6 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-2-hydroxy-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



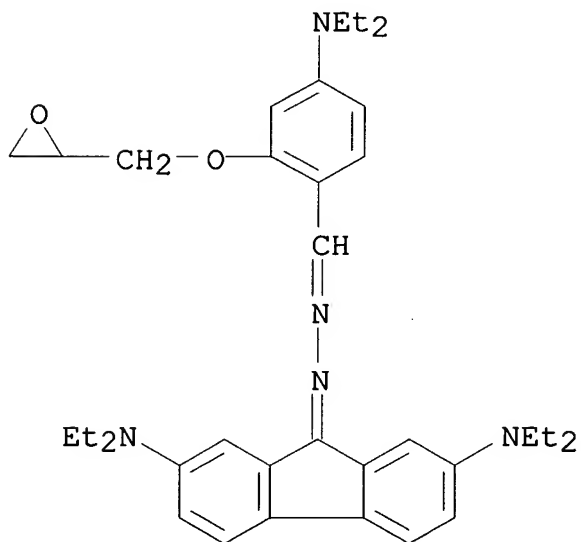
RN 816464-04-7 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-2-(oxiranylmethoxy)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



RN 816464-07-0 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-2-(oxiranylmethoxy)-,  
[2,7-bis(diethylamino)-9H-fluoren-9-ylidene]hydrazone (9CI) (CA  
INDEX NAME)



IT 816464-06-9P

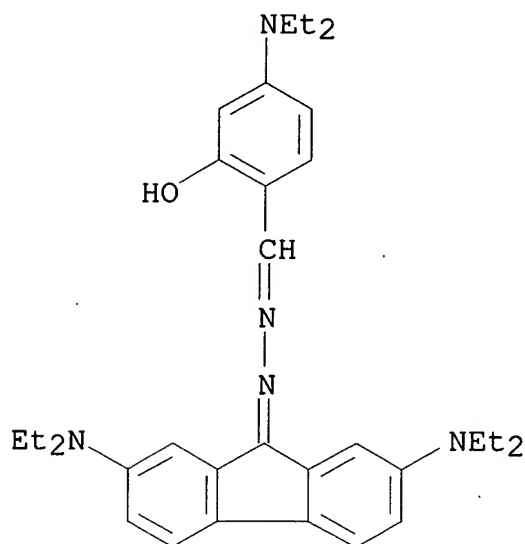
(preparation of azine-based dimeric charge transport materials for

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electrophotog.)

RN 816464-06-9 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-2-hydroxy-, [2,7-bis(diethylamino)-9H-fluoren-9-ylidene]hydrazone (9CI) (CA INDEX NAME)



IC ICM G03G005-06

ICS C07C251-72

NCL 430058350; 430072000; 430077000; 430074000; 430058650; 564251000

CC 74-3 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

IT **816463-93-1P 816463-94-2P 816463-95-3P**

**816463-96-4P 816463-97-5P 816463-98-6P**

**816463-99-7P 816464-00-3P 816464-01-4P**

816464-02-5P

(azine-based dimeric charge transport materials for electrophotog.)

IT 2915-84-6P, 2,7-Diamino-9-fluorenone 122010-64-4P 215377-16-5P

**816464-03-6P 816464-04-7P 816464-05-8P**

**816464-07-0P 816464-08-1P**

(preparation of azine-based dimeric charge transport materials for electrophotog.)

IT 13629-22-6P **816464-06-9P**

(preparation of azine-based dimeric charge transport materials for electrophotog.)

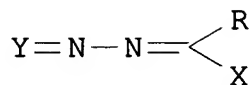
L12 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

USHA SHRESTHA REM 4B28

ACCESSION NUMBER: 2004:931003 CAPLUS  
 DOCUMENT NUMBER: 141:403447  
 TITLE: Organophotoreceptors comprising azine-based  
 charge transport compounds  
 INVENTOR(S): Jubran, Nusrallah; Tokarski, Zbigniew; Law,  
 Kam W.  
 PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea  
 SOURCE: Eur. Pat. Appl., 23 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1473599	A1	20041103	EP 2004-252329	2004 0421
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
US 2004219446	A1	20041104	US 2004-775429	2004 0210
JP 2004334210	A2	20041125	JP 2004-136630	2004 0430
PRIORITY APPLN. INFO.:				2003 0430
US 2003-466813P				P
US 2004-775429P				P
US 2004-775429				A
				2004 0210

OTHER SOURCE(S): MARPAT 141:403447  
 GI



I

AB The present invention provides organophotoreceptors comprising an elec. conductive substrate and a photoconductive element on the elec. conductive substrate, the photoconductive element comprising: (a) a charge transport material having the formula I (R = H, alkyl, alkenyl, heterocyclic, aromatic; X = arylamine; Y = 9-fluorenylidene); and (b) a charge generating compound. Corresponding electrophotog. apparatuses, imaging methods, and charge transport materials are also described. This invention aims to provide organophotoreceptors having good electrostatic properties such as high V<sub>acc</sub> and low V<sub>dis</sub>. The invention also aims to provide charge transport materials having an increased compatibility with polymeric binders and an improved solubility in organic solvents for processing.

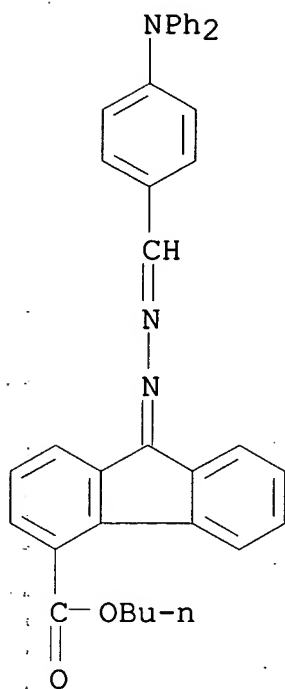
IT **787552-86-7P 787552-87-8P 787552-88-9P**  
**787552-89-0P 787552-90-3P**

(charge-transport compound; organophotoreceptors with azine-based compds.)

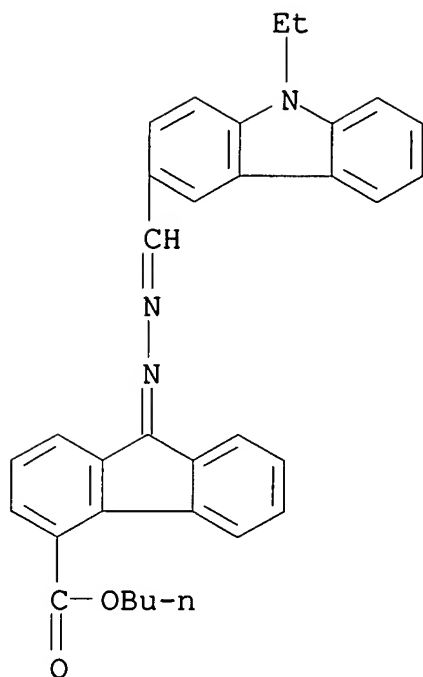
RN 787552-86-7 CAPLUS

CN 9H-Fluorene-4-carboxylic acid, 9-[[[4-(diphenylamino)phenyl]methylene]hydrazono]-, butyl ester (9CI)  
(CA INDEX NAME)



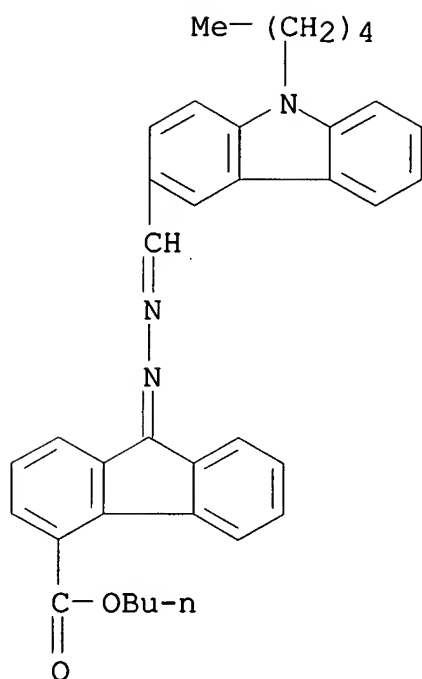


RN 787552-87-8 CAPLUS  
 CN 9H-Fluorene-4-carboxylic acid, 9-[[[9-ethyl-9H-carbazol-3-yl)methylene]hydrazono]-, butyl ester (9CI) (CA INDEX NAME)



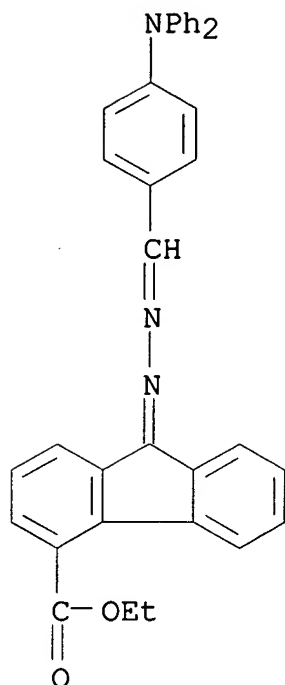
RN 787552-88-9 CAPLUS

CN 9H-Fluorene-4-carboxylic acid, 9-[[[9-pentyl-9H-carbazol-3-yl)methylene]hydrazono]-, butyl ester (9CI) (CA INDEX NAME)



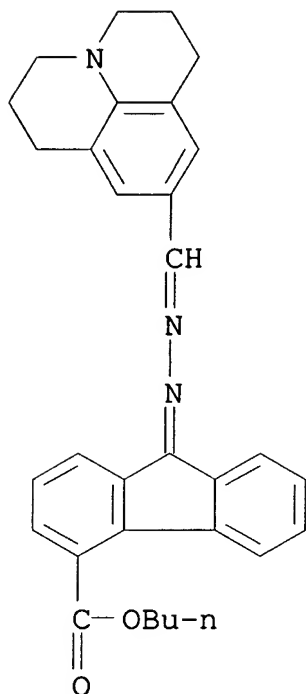
RN 787552-89-0 CAPLUS

CN 9H-Fluorene-4-carboxylic acid, 9-[[[4-(diphenylamino)phenyl]methylene]hydrazono]-, ethyl ester (9CI)  
(CA INDEX NAME)



RN 787552-90-3 CAPLUS

CN 9H-Fluorene-4-carboxylic acid, 9-[[[(2,3,6,7-tetrahydro-1H,5H-benzo[ij]quinolizin-9-yl)methylene]hydrazono]-, butyl ester (9CI)  
(CA INDEX NAME)



IC ICM G03G005-06  
 ICS C07C245-10; C07D455-04; C07D209-86  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT **787552-86-7P 787552-87-8P 787552-88-9P**  
**787552-89-0P 787552-90-3P**  
 (charge-transport compound; organophotoreceptors with azine-based  
 compds.)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L12 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:609905 CAPLUS  
 DOCUMENT NUMBER: 137:161377  
 TITLE: Electrophotographic photoconductor containing  
 fluorenyl-azine derivatives and triarylamine  
 in charge transport layer  
 INVENTOR(S): Haggquist, Gregory Walter; Levin, Ronald  
 Harold; Luo, Weimei; Mosier, Scott Thomas  
 PATENT ASSIGNEE(S): Lexmark International, Inc., USA  
 SOURCE: U.S., 4 pp.

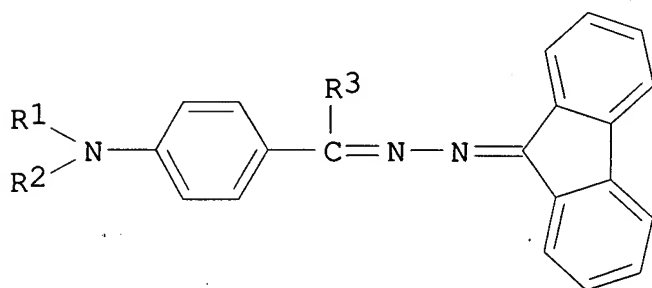
USHA SHRESTHA REM 4B28

DOCUMENT TYPE: CODEN: USXXAM  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: English  
 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6432597	B1	20020813	US 2000-732824	2000 1208
GB 2371876	A1	20020807	GB 2001-29406	2001 1207
GB 2371876	B2	20040428	US 2000-732824	A 2000 1208

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 137:161377  
 GI

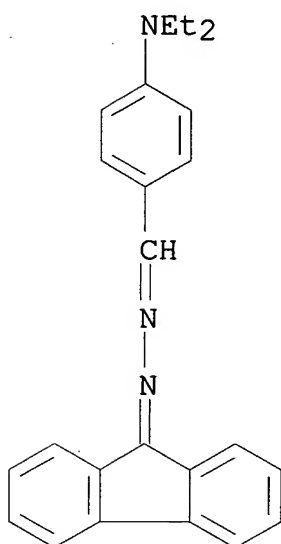


I

AB Azine derivs. represented by I (R1, R2 = Et, phenyl; R3 = H, phenyl) or their combinations with hindered phenol antioxidant in the charge transport layer containing one or more triarylamines or a combination of one triarylamine and one hydrazone improve light fatigue of a photoreceptor, which results in stabilized print quality. The robust performance against light damage allows the shutter in a cartridge to be removed and the requirement for special protection procedure during inspection and handling to be

simplified.

IT **87695-81-6**, 9-[p-(Diethylamino)benzylidenehydrazono]fluorene  
 (fluorenyl azine; electrophotog. photoconductor containing fluorenyl-azine derivs. and triarylamine in charge transport layer for reducing dark decay and improving crazing resistance)  
 RN 87695-81-6 CAPLUS  
 CN Benzaldehyde, 4-(diethylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



IC ICM G03G005-047  
 NCL 430058450  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
 IT **87695-81-6**, 9-[p-(Diethylamino)benzylidenehydrazono]fluorene  
 ne (fluorenyl azine; electrophotog. photoconductor containing fluorenyl-azine derivs. and triarylamine in charge transport layer for reducing dark decay and improving crazing resistance)  
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:808568 CAPLUS  
 DOCUMENT NUMBER: 132:57081

USHA SHRESTHA REM 4B28

TITLE: Electrophotographic photoconductor containing  
fluorenyl-azine derivatives as charge  
transport additives

INVENTOR(S): Bellino, Mark Thomas; Champ, Robert Bruce;  
Luo, Weimei

PATENT ASSIGNEE(S): Lexmark International, Inc., USA

SOURCE: U.S., 8 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6004708	A	19991221	US 1999-292531	1999 0415
WO 2000063748	A1	20001026	WO 2000-US694	2000 0111
<p>W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM</p> <p>RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG</p>				
EP 1171805	A1	20020116	EP 2000-908255	2000 0111
<p>R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO</p>				
JP 2002542515	T2	20021210	JP 2000-612801	2000 0111
JP 3586742	B2	20041110		
PRIORITY APPLN. INFO.:			US 1999-292531	A 1999 0415

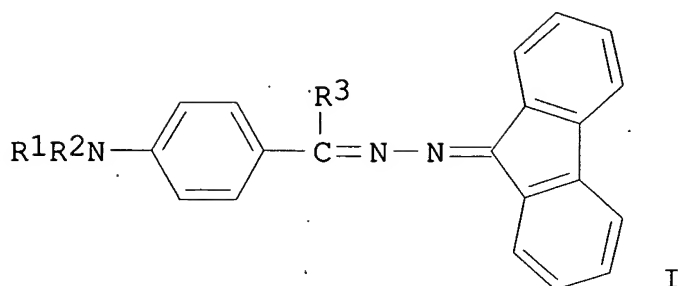


WO 2000-US694

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2000  
0111

OTHER SOURCE(S): MARPAT 132:57081  
GI



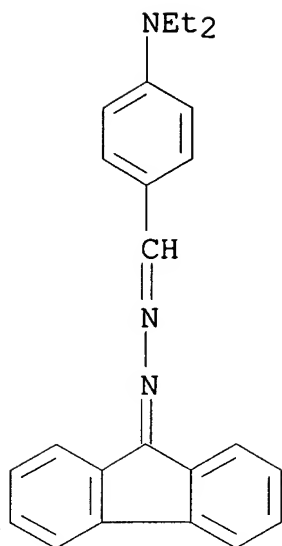
AB A photoconductor for use in electrophotog. reproduction devices is disclosed. This photoconductor exhibits reduced room light and cycling fatigue without any corresponding neg. impact on the sensitivity of the photoconductor. The photoconductor of the present invention includes specifically defined fluorenyl-azine derivs. in its charge transport layer. These materials have the structure (I) where R1 and R2 independently selected from C1-C4 alkyl and Ph, and R3 is selected from H, C1-C4 alkyl, and Ph.

IT **87695-81-6 87695-85-0**

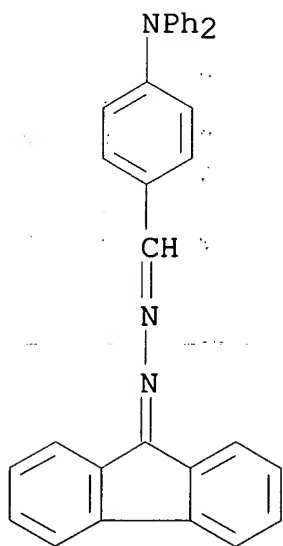
(electrophotog. photoconductor with charge transport layer containing fluorenyl-azine derivs. and)

RN 87695-81-6 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



RN 87695-85-0 CAPLUS  
 CN Benzaldehyde, 4-(diphenylamino)-, 9H-fluoren-9-ylidenehydrazine  
 (9CI) (CA INDEX NAME)



IC ICM G03G005-047  
 NCL 430058450  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and

**Photographic and Other Reprographic Processes)**

IT 80-05-7, Bisphenol A, uses 24936-68-3, Makrolon 5208, uses  
68189-23-1, p-(Diethylamino)benzaldehyde diphenylhydrazone  
**87695-81-6 87695-85-0**

(electrophotog. photoconductor with charge transport layer  
containing fluorenyl-azine derivs. and)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L12 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:511131 CAPLUS

DOCUMENT NUMBER: 131:157643

TITLE: Preparation of hydrazones derivatives for  
treatment or prevention of diseases related to  
glucose metabolic pathways

INVENTOR(S): Jacobsen, Palle; Madsen, Peter; Westergaard,  
Niels

PATENT ASSIGNEE(S): Novo Nordisk A/s, Den.

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9940062	A1	19990812	WO 1999-DK53	1999 0203

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,  
CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,  
IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,  
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN,  
YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE,  
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,  
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9926102 A1 19990823 AU 1999-26102

1999  
0203

PRIORITY APPLN. INFO.:

DK 1998-159

A

USHA SHRESTHA

REM 4B28

1998  
0205

US 1998-74001P P

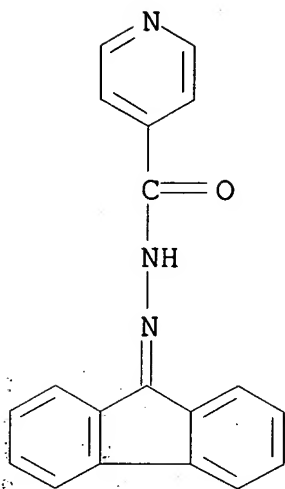
1998  
0209

WO 1999-DK53 W

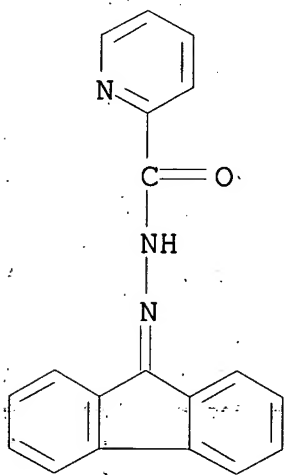
1999  
0203

OTHER SOURCE(S): MARPAT 131:157643

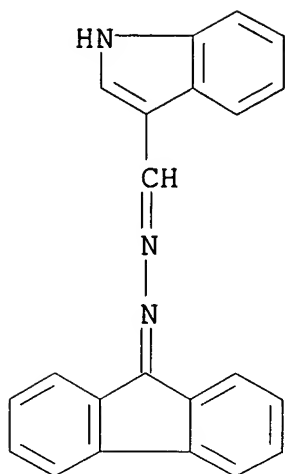
- AB Hydrazone derivs. of formula  $R_1R_2C=NNR_3R_4$  (I) or  $R_1R_2C=NN=CR_3R_4$  (II) [ $R_1-R_4 = H$ , C1-8 alkyl, C3-8 cycloalkyl, OH, acyl, C1-6 alkoxy, NO<sub>2</sub>, cyano, (un)substituted carbonyl, (un)substituted amino, (un)substituted sulfonamide, (un)substituted (hetero)aryl, etc.;  $R_1$  and  $R_2$  or  $R_3$  and  $R_4$  may together form an (un)substituted hetero- or carbocycle], were prepd for use as medicaments in therapy especially in the treatment of diseases related to glucose metabolic pathways. Specifically, claimed compds. I and II were prepared for use in the treatment or prevention of diseases of the endocrinol. system, preferably hyperglycemia, NIDDM, or diabetes, and for treatment of glycogen storage disease or hypoglycemia. Compns. of the invention are claimed to exhibit glucose-6-phosphatase inhibitory activity with IC<sub>50</sub> values of less than 100  $\mu$ M (no data). Thus, 4-chlorobenzaldehyde was added to N,N-dibenzylhydrazine in DMF followed by addition of tri-Et orthoformate to form N,N-dibenzyl-N'-(4-chlorobenzylidene)hydrazine, i.e., I (where  $R_1 = H$ ,  $R_2 = C_6H_4-p-Cl$ , and  $R_3 = R_4 = CH_2Ph$ ), in 94% yield.
- IT **237403-47-3P**, Isonicotinic acid fluoren-9-ylidenehydrazide  
**237403-48-4P**, Pyridine-2-carboxylic acid fluoren-9-ylidenehydrazide **237403-52-0P**,  
N-Fluoren-9-ylidene-N'-(1H-indol-3-ylmethylene)hydrazine  
(preparation of hydrazone derivs. for treatment or prevention of diseases of the endocrinol. system, preferably hyperglycemia, NIDDM, or diabetes, and for treatment of glycogen storage disease or hypoglycemia)
- RN 237403-47-3 CAPLUS
- CN 4-Pyridinecarboxylic acid, 9H-fluoren-9-ylidenehydrazide (9CI)  
(CA INDEX NAME)



RN 237403-48-4 CAPLUS  
 CN 2-Pyridinecarboxylic acid, 9H-fluoren-9-ylidenehydrazide (9CI)  
 (CA INDEX NAME)



RN 237403-52-0 CAPLUS  
 CN 1H-Indole-3-carboxaldehyde, 9H-fluoren-9-ylidenehydrazone (9CI)  
 (CA INDEX NAME)



IC ICM C07C251-86  
ICS C07C251-82; C07C251-88; C07D213-44; C07D307-52; C07D333-22;  
A61K031-15; A61K031-34; A61K031-38; A61K031-435

CC 25-5 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 1

IT 966-88-1P, N'-Benzylidene-N,N-diphenylhydrazine 2675-35-6P,  
4,4'-Dihydroxybenzophenone 2,4-dinitrophenylhydrazone  
2989-45-9P, N'-Benzylidene-N-methyl-N-phenylhydrazine  
7627-02-3P, [4-(Dibenzylhydrazonomethyl)phenyl]dimethylamine  
21136-32-3P, N,N-Dibenzyl-N'-benzylidenehydrazine 21771-95-9P,  
N-Benzyl-N'-phenethylidene-N-phenylhydrazine 23718-81-2P,  
N'-(4-Methoxybenzylidene)-N,N-diphenylhydrazine 23718-88-9P,  
N'-Furan-2-ylmethylene-N,N-diphenylhydrazine 28150-00-7P,  
N-Benzhydrylidene-N'-(1-phenylpropylidene)hydrazine 28614-89-3P,  
N'-Phenethylidene-N,N-diphenylhydrazine 28856-29-3P,  
N,N-Diphenyl-N'-(1-phenylpropylidene)hydrazine 28925-62-4P,  
N,N-Dibenzyl-N'-(4-chlorobenzylidene)hydrazine 31400-19-8P,  
N-Benzhydrylidene-N'-(4-methoxybenzylidene)hydrazine  
59670-26-7P, N'-(4-Methoxybenzylidene)-N-methyl-N-phenylhydrazine  
61777-31-9P, 1-[(Furan-2-ylmethylene)amino]-4,6-diphenyl-1H-  
pyridin-2-one 62084-77-9P, N-Benzyl-N'-(4-nitrobenzylidene)-N-  
phenylhydrazine 66832-50-6P, N'-(3,4-Dihydro-2H-naphthalen-1-  
ylidene)-N,N-diphenylhydrazine 67134-48-9P, N-Methyl-N'-  
phenethylidene-N-phenylhydrazine 67458-47-3P,  
N'-(4-Chloro-2H-phthalazin-1-ylidene)-N,N-diphenylhydrazine  
73861-04-8P, 3-[(4-Methoxybenzylidene)amino]-2-phenyl-3H-  
quinazolin-4-one 76604-05-2P, 2-(Carbazol-9-yliminomethyl)phenol  
79492-38-9P, (3,4-Dihydro-1H-isoquinolin-2-yl)(4-methoxy-

benzylidene)amine 80165-58-8P, N-Benzyl-N'-(4-methoxybenzylidene)-N-phenylhydrazine 85303-10-2P, N'-[1-(4-Methoxyphenyl)propylidene]-N-methyl-N-phenylhydrazine 95060-18-7P, 3-(Diphenylhydrazono)-1,3-dihydroindol-2-one 106032-41-1P, N-Methyl-N-phenyl-N'-(1-phenylpropylidene)hydrazine 106873-08-9P, 3-[(4-Dimethylaminobenzylidene)amino]-2-phenyl-3H-quinazolin-4-one 117138-69-9P, N'-(3,4-Dihydro-2H-naphthalen-1-ylidene)-N-methyl-N-phenylhydrazine 121597-23-7P, 2-(3-Phenylpropylideneamino)isoindole-1,3-dione 139546-58-0P, N,N-Diphenyl-N'-(3-phenylpropylidene)hydrazine 202804-41-9P, 3-(Diphenylhydrazono)-1-methyl-1,3-dihydroindol-2-one 213965-69-6P, N-Benzyl-N'-(4-chlorobenzylidene)-N-phenylhydrazine 217200-19-6P, N-Methyl-N'-(1-methyl-3-phenylpropylidene)-N-phenylhydrazine 237402-26-5P, N,N-Dibenzyl-N'-(5-ethyl-2-furylmethylidene)hydrazine 237402-27-6P, N,N-Dibenzyl-N'-(pyridin-4-ylmethylene)hydrazine 237402-28-7P, N,N-Dibenzyl-N'-(4-methoxybenzylidene)hydrazine 237402-29-8P, N,N-Dibenzyl-N'-(pyridin-2-ylmethylene)hydrazine 237402-30-1P, N,N-Dibenzyl-N'-(1H-imidazol-2-ylmethylene)hydrazine 237402-31-2P, N,N-Dibenzyl-N'-(5-nitrofuran-2-ylmethylene)hydrazine 237402-32-3P, N-[4-(Dibenzylhydrazonomethyl)phenyl]acetamide 237402-33-4P, N,N-Dibenzyl-N'-(3,5-dichlorobenzylidene)hydrazine 237402-34-5P, N,N-Dibenzyl-N'-(3,4-dichlorobenzylidene)hydrazine 237402-35-6P, 4-(Dibenzylhydrazonomethyl)benzoic acid methyl ester 237402-36-7P, 4-(Dibenzylhydrazonomethyl)-2-methoxyphenol 237402-37-8P, N,N-Dibenzyl-N'-thiophen-2-ylmethylenehydrazine 237402-38-9P, 4-(Dibenzylhydrazonomethyl)benzoic acid 237402-39-0P, N,N-Dibenzyl-N'-(1-phenylethylidene)hydrazine 237402-40-3P, N,N-Dibenzyl-N'-(3,4-dihydro-1H-naphthalen-2-ylidene)hydrazine 237402-41-4P, N'-(3,4-Dihydro-1H-naphthalen-2-ylidene)-N, N-diphenylhydrazine 237402-42-5P, N-Benzyl-N'-(3,4-dihydro-1H-naphthalen-2-ylidene)-N-phenylhydrazine 237402-43-6P, N'-(1-Methyl-3-phenylpropylidene)-N,N-diphenylhydrazine 237402-44-7P, N-Benzyl-N'-(1-methyl-3-phenylpropylidene)-N-phenylhydrazine 237402-45-8P, N,N-Dibenzyl-N'-(3-phenylpropylidene)hydrazine 237402-46-9P, N-Benzyl-N-phenyl-N'-(3-phenylpropylidene)hydrazine 237402-47-0P, N,N-Dibenzyl-N'-[2-(4-methoxyphenyl)-1-methylethylidene]hydrazine 237402-48-1P, N'-[2-(4-Methoxyphenyl)-1-methylethylidene]-N,N-diphenylhydrazine 237402-49-2P, N-Benzyl-N'-[2-(4-methoxyphenyl)-1-methylethylidene]-N-phenylhydrazine 237402-50-5P, N,N-Dibenzyl-N'-[2-(3,4-dimethoxyphenyl)-1-methylethylidene]hydrazine 237402-51-6P, N'-[2-(3,4-Dimethoxyphenyl)-1-methylethylidene]-N,N-

diphenylhydrazine 237402-52-7P, N-Benzyl-N'-[2-(3,4-dimethoxyphenyl)-1-methylethylidene]-N-phenylhydrazine 237402-53-8P, N,N-Dibenzyl-N'-phenethylidenehydrazine 237402-54-9P, N,N-Dibenzyl-N'-[1-(4-methoxyphenyl)propylidene]hydrazine 237402-55-0P 237402-56-1P, N-Benzyl-N'-[1-(4-methoxyphenyl)propylidene]-N-phenylhydrazine 237402-57-2P, N,N-Dibenzyl-N'-(3,4-dihydro-2H-naphthalen-1-ylidene)hydrazine 237402-58-3P 237402-59-4P, N,N-Dibenzyl-N'-(6-methoxy-3,4-dihydro-2H-naphthalen-1-ylidene)hydrazine 237402-60-7P 237402-61-8P, N-Benzyl-N'-(6-methoxy-3,4-dihydro-2H-naphthalen-1-ylidene)-N-phenylhydrazine 237402-62-9P, N,N-Dibenzyl-N'-(1-phenylpropylidene)hydrazine 237402-63-0P 237402-64-1P, 4-[1-(Dibenzylhydrazono)propyl]phenol 237402-65-2P, 4-[1-(Benzylphenylhydrazono)propyl]phenol 237402-66-3P, N,N-Dibenzyl-N'-[1-(4-chlorophenyl)propylidene]hydrazine 237402-67-4P 237402-68-5P, N-Benzyl-N'-[1-(4-chlorophenyl)propylidene]-N-phenylhydrazine 237402-69-6P 237402-70-9P, 2-[(3,4-Dihydro-1H-naphthalen-2-ylidene)hydrazono]-1,2-diphenylethanone 237402-71-0P, N-Methyl-N-phenyl-N'-(3-phenylpropylidene)hydrazine 237402-72-1P, 1,2-Diphenyl-2-[(3-phenylpropylidene)hydrazono]ethanone 237402-73-2P, N'-[2-(3,4-Dimethoxyphenyl)-1-methylethylidene]-N-methyl-N-phenylhydrazine 237402-74-3P, 2-[[2-(3,4-Dimethoxyphenyl)-1-methylethylidene]hydrazono]-1,2-diphenylethanone 237402-75-4P, 2-(Phenethylidenehydrazono)-1,2-diphenylethanone 237402-76-5P 237402-77-6P, N'-(6-Methoxy-3,4-dihydro-2H-naphthalen-1-ylidene)-N-methyl-N-phenylhydrazine 237402-78-7P, 2-[(6-Methoxy-3,4-dihydro-2H-naphthalen-1-ylidene)hydrazono]-1,2-diphenylethanone 237402-79-8P, 1,2-Diphenyl-2-[(1-phenylpropylidene)hydrazono]ethanone 237402-80-1P, 4-[1-(Methylphenylhydrazono)propyl]phenol 237402-81-2P, 2-[[1-(4-Hydroxyphenyl)propylidene]hydrazono]-1,2-diphenylethanone 237402-82-3P 237402-83-4P, 2-[[1-(4-Methoxyphenyl)propylidene]hydrazono]-1,2-diphenylethanone 237402-84-5P, N-Benzhydrylidene-N'-(1-methyl-3-phenylpropylidene)hydrazine 237402-85-6P, 2-(3,4-Dihydro-1H-naphthalen-2-ylideneamino)isoindole-1,3-dione 237402-86-7P, N-Benzhydrylidene-N'-(3,4-dihydro-1H-naphthalen-2-ylidene)hydrazine 237402-87-8P, 2-(1-Methyl-3-phenylpropylideneamino)isoindole-1,3-dione 237402-88-9P, N-Benzhydrylidene-N'-(3-phenylpropylidene)hydrazine 237402-89-0P, N-(7-Chloroquinolin-4-yl)-N'-(3-phenylpropylidene)hydrazine 237402-90-3P, N-Benzhydrylidene-N'-[2-(4-methoxyphenyl)-1-methylethylidene]hydrazine 237402-91-4P 237402-92-5P, N-Benzhydrylidene-N'-[2-(3,4-dimethoxyphenyl)-1-methylethylidene]hydrazine 237402-93-6P, 2-



(Phenethylideneamino)isoindole-1,3-dione 237402-94-7P,  
 N-Benzhydrylidene-N'-phenethylidenehydrazine 237402-95-8P,  
 N-(7-Chloroquinolin-4-yl)-N'-phenethylidenehydrazine  
 237402-96-9P, 2-(3,4-Dihydro-2H-naphthalen-1-  
 ylideneamino)isoindole-1,3-dione 237402-97-0P,  
 N-Benzhydrylidene-N'-(3,4-dihydro-2H-naphthalen-1-  
 ylidene)hydrazine 237402-98-1P, N-(7-Chloroquinolin-4-yl)-N'-  
 (3,4-dihydro-2H-naphthalen-1-ylidene)hydrazine 237402-99-2P,  
 N-Benzhydrylidene-N'-(6-methoxy-3,4-dihydro-2H-naphthalen-1-  
 ylidene)hydrazine 237403-00-8P, 237403-01-9P,  
 N-(7-Chloroquinolin-4-yl)-N'-(1-phenylpropylidene)hydrazine  
 237403-02-0P, 4-[1-[(7-Chloroquinolin-4-yl)hydrazono]propyl]phenol  
 237403-03-1P, N-[1-(4-Chlorophenyl)propylidene]-N'-(7-  
 chloroquinolin-4-yl)hydrazine 237403-04-2P, N-(7-Chloroquinolin-  
 4-yl)-N'-[1-(4-methoxyphenyl)propylidene]hydrazine  
 237403-05-3P, 4-[5-(4-Chlorophenyl)-4-[(furan-2-ylmethylene)amino]-  
 4H-[1,2,4]triazol-3-ylsulfanylmethyl]benzoic acid methyl ester  
 237403-06-4P, 4-[5-(4-Chlorophenyl)-4-[(4-  
 methoxybenzylidene)amino]-4H-[1,2,4]triazol-3-  
 ylsulfanylmethyl]benzoic acid methyl ester 237403-07-5P,  
 4-[5-(4-Chlorophenyl)-4-[(4-trifluoromethoxybenzylidene)amino]-4H-  
 [1,2,4]triazol-3-ylsulfanylmethyl]benzoic acid methyl ester  
 237403-08-6P, [3-Benzylsulfanyl-5-(4-methoxyphenyl)[1,2,4]triazol-  
 4-yl]furan-2-ylmethyleneamine 237403-09-7P 237403-10-0P,  
 9H-Xanthene-9-carboxylic acid furan-2-ylmethylenehydrazide  
 237403-11-1P, 9H-Xanthene-9-carboxylic acid (4-  
 hydroxybenzylidene)hydrazide 237403-12-2P, 9H-Xanthene-9-  
 carboxylic acid (4-trifluoromethoxybenzylidene)hydrazide  
 237403-13-3P, [3,5-Di(pyridin-2-yl)[1,2,4]triazol-4-yl](4-  
 trifluoromethoxybenzylidene)amine 237403-14-4P,  
 N-Acridin-9-yl-N'-furan-2-ylmethylenehydrazine 237403-15-5P,  
 N-Acridin-9-yl-N'-(4-methoxybenzylidene)hydrazine 237403-16-6P,  
 N-Acridin-9-yl-N'-(4-trifluoromethoxybenzylidene)hydrazine  
 237403-17-7P, (3,4-Dihydro-1H-isoquinolin-2-yl)furan-2-  
 ylmethyleneamine 237403-18-8P, (3,4-Dihydro-1H-isoquinolin-2-  
 yl)(4-trifluoromethoxybenzylidene)amine 237403-19-9P,  
 N-Benzhydrylidene-N'-furan-2-ylmethylenehydrazine 237403-20-2P,  
 N'-Furan-3-ylmethylene-N,N-diphenylhydrazine 237403-21-3P,  
 N'-Furan-3-ylmethylene-N-methyl-N-phenylhydrazine 237403-22-4P  
 237403-23-5P, N-Benzhydrylidene-N'-(4-chlorobenzylidene)hydrazine  
 237403-24-6P, N-Benzyl-N-phenyl-N'-(4-  
 trifluoromethoxybenzylidene)hydrazine 237403-25-7P,  
 N-Benzhydrylidene-N'-(4-trifluoromethoxybenzylidene)hydrazine  
 237403-26-8P, N,N-Bis-(4-methoxybenzyl)-N'-pyridin-3-  
 ylmethylenehydrazine 237403-27-9P, N'-Furan-3-ylmethylene-N,N-

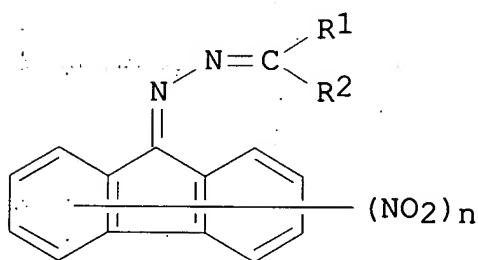
bis-(4-methoxybenzyl)hydrazine 237403-28-0P,  
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 N'-(5-Ethylfuran-2-ylmethylene)-N,N-bis-(4-methoxybenzyl)hydrazine 237403-32-6P, N'-Furan-2-ylmethylene-N,N-bis-(4-methoxybenzyl)hydrazine 237403-33-7P, N'-(1H-Imidazol-4-ylmethylene)-N,N-bis-(4-methoxybenzyl)hydrazine 237403-34-8P,  
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 N-Benzyl-N'-(1H-imidazol-4-ylmethylene)-N-(4-trifluoromethylbenzyl)hydrazine 237403-38-2P,  
 N-Benzyl-N'-furan-3-ylmethylene-N-(4-trifluoromethylbenzyl)hydrazine 237403-39-3P, N-(4-Dimethylaminophenyl)-3-(phenylacetylhydrazono)butyramide 237403-40-6P,  
 3-[(Furan-3-ylmethylene)amino]-2-phenyl-3H-quinazolin-4-one 237403-41-7P, 2-(4-Bromophenyl)-3-[(3,4-dihydroxybenzylidene)amino]-3H-quinazolin-4-one 237403-42-8P  
 237403-43-9P, 2,4-Dichloro-6-[methyl(2-nitro-4-trifluoromethylphenyl)hydrazonomethyl]phenol 237403-44-0P,  
 4-Fluorobenzoic acid (10H-anthracen-9-ylidene)hydrazide 237403-45-1P, 2-[(4-Bromobenzylidene)amino]benzo[de]isoquinoline-1,3-dione 237403-46-2P, 4-(Diphenylhydrazonomethyl)-5-methyl-2-phenyl-2H-pyrazol-3-ol **237403-47-3P**, Isonicotinic acid fluoren-9-ylidenehydrazide **237403-48-4P**,  
 Pyridine-2-carboxylic acid fluoren-9-ylidenehydrazide 237403-49-5P 237403-50-8P, Hydroxydiphenylacetic acid [1-(4-tert-butylphenyl)ethylidene]hydrazide 237403-51-9P,  
 [5-(Dibenzylhydrazonomethyl)furan-2-yl]methanol **237403-52-0P**, N-Fluoren-9-ylidene-N'-(1H-indol-3-ylmethylene)hydrazine 237403-53-1P, 2-(Fluoren-9-ylidenehydrazonomethyl)phenol 237403-54-2P, [4-(Fluoren-9-ylidenehydrazonomethyl)phenoxy]acetic acid 237403-55-3P,  
 N-Fluoren-9-ylidene-N'-furan-2-ylmethylenehydrazine 237403-56-4P, N-Fluoren-9-ylidene-N'-[2-(1,3,3-trimethyl-1,3-dihydro-indol-2-ylidene)ethylidene]hydrazine 237403-57-5P,  
 N,N-Dibenzyl-N'-furan-2-ylmethylenehydrazine 237403-58-6P,  
 N,N-Dibenzyl-N'-(4-hydroxybenzylidene)hydrazine  
 (preparation of hydrazone derivs. for treatment or prevention of diseases of the endocrinol. system, preferably hyperglycemia, NIDDM, or diabetes, and for treatment of glycogen storage disease or hypoglycemia)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L12 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:735461 . CAPLUS  
DOCUMENT NUMBER: 130:45250  
TITLE: Electrophotographic photoreceptor with  
improved durability  
INVENTOR(S): Kawahara, Tatsuo  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10301306	A2	19981113	JP 1997-108924	1997 0425
PRIORITY APPLN. INFO.:			JP 1997-108924	1997 0425

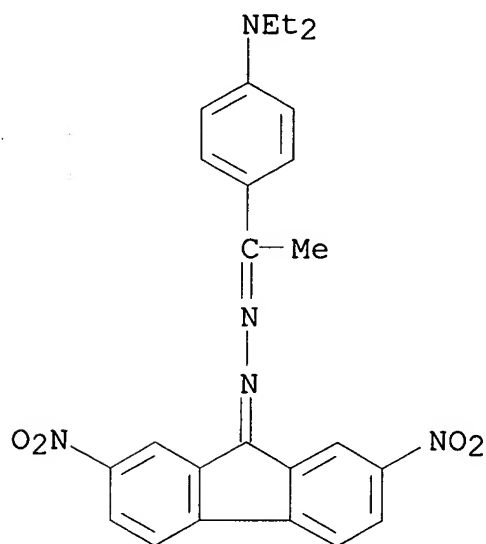
OTHER SOURCE(S): MARPAT 130:45250  
GI



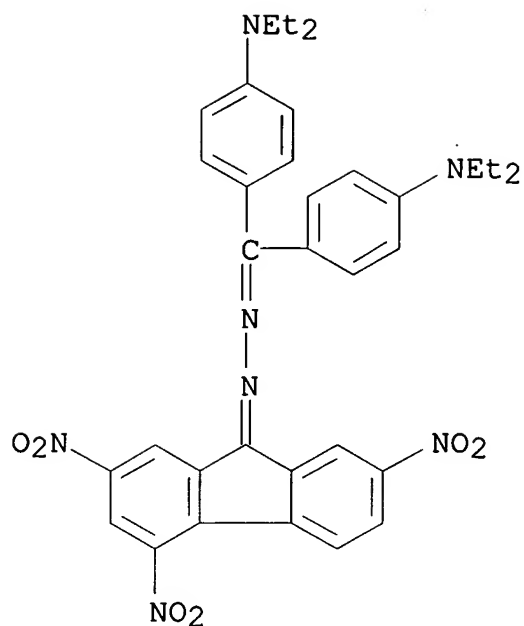
AB The title photoreceptor comprises an elec. conductive support  
coated with a photosensitive layer containing a

methylidenehydrazonofluorene derivative I [R1, R2 = alkyl, aryl, aralkyl, heterocycle (these groups may be substituted), R1 and R2 may form a ring; n = 1-4] as an electron-transporting agent. The photoreceptor, adaptable to both pos. and neg. charging processes, shows improved charge retention, high photosensitivity, and low residual potential.

IT **216752-05-5P**  
 (electrophotog. photoconductor using  
 methylidenehydrazonofluorene as electron-transporting agent)  
 RN 216752-05-5 CAPLUS  
 CN 9H-Fluoren-9-one, 2,7-dinitro-, [1-[4-  
 (diethylamino)phenyl]ethylidene]hydrazone (9CI) (CA INDEX NAME)

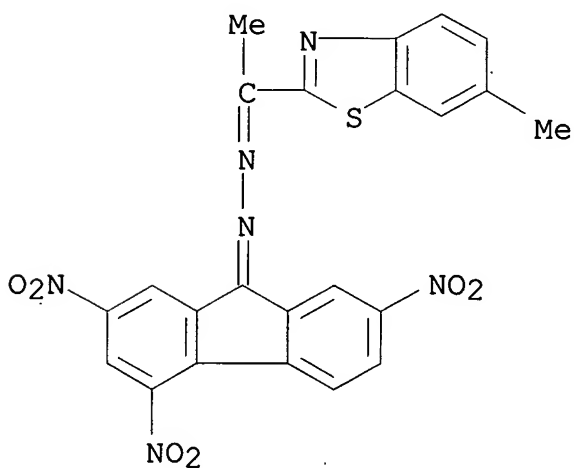


IT **216752-07-7 216752-08-8**  
 (electrophotog. photoconductor using  
 methylidenehydrazonofluorene as electron-transporting agent)  
 RN 216752-07-7 CAPLUS  
 CN 9H-Fluoren-9-one, 2,4,7-trinitro-, [bis[4-  
 (diethylamino)phenyl]methylene]hydrazone (9CI) (CA INDEX NAME)



RN 216752-08-8 CAPLUS

CN 9H-Fluoren-9-one, 2,4,7-trinitro-, [1-(6-methyl-2-benzothiazolyl)ethylidene]hydrazone (9CI) (CA INDEX NAME)



IC ICM G03G005-06

CC 74-3 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)

USHA SHRESTHA

REM 4B28

IT **216752-05-5P**  
 (electrophotog. photoconductor using  
 methylidenehydrazonofluorene as electron-transporting agent)  
 IT 216752-06-6 **216752-07-7 216752-08-8**  
 216752-09-9  
 (electrophotog. photoconductor using  
 methylidenehydrazonofluorene as electron-transporting agent)

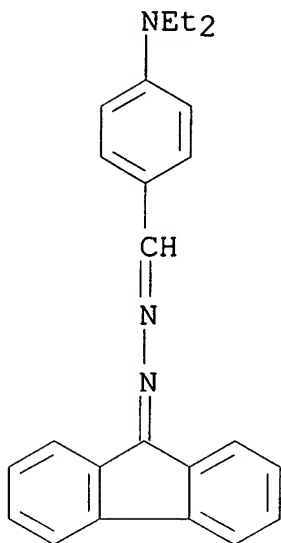
L12 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1997:1357 CAPLUS  
 DOCUMENT NUMBER: 126:143879  
 TITLE: Characterization of 9-(p-substituted  
 benzylidenehydrazono)fluorenes  
 AUTHOR(S): Minabe, Masahiro; Takabayashi, Yutaka; Setta,  
 Yuji; Nakamura, Hidenao; Kimura, Takao;  
 Tsubota, Motohiro  
 CORPORATE SOURCE: Faculty of Engineering, Utsunomiya University,  
 Utsunomiya, 321, Japan  
 SOURCE: Bulletin of the Chemical Society of Japan  
 (1996), 69(12), 3633-3638  
 CODEN: BCSJA8; ISSN: 0009-2673  
 PUBLISHER: Nippon Kagakkai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The title azine was obtained by a reaction of the corresponding  
 fluorenone hydrazone and p-substituted benzaldehyde. The  
 hydrazone formed from the unsym. fluorenone afforded  
 configurational isomers; the E-isomer was thermodynamically more  
 stable than the Z-isomer. The structure of the title azines,  
 derived from sym. fluorenone, was assigned to be (s-trans/E) form.  
 The azines from unsym. fluorenone gave isomeric mixts. due to the  
 9-iminofluorene moiety. The electronic spectra of these azines  
 show an intramol. charge transfer; the red shift beyond 250 nm is  
 observed in the case of 9-[p-(diethylamino)benzylidenehydrazono]-  
 2,4,7-trinitrofluorene, compared to the 250 nm is observed in the  
 case of 9-[p-(diethylamino)benzylidenehydrazono]-2,4,7-  
 trinitrofluorene, compared to the mother azine.  
 9-[P-(Pentyloxy)benzylidenehydrazono]-2,7-dinitrofluorene and some  
 of the homologs possess a liq.crystalline property; the  
 phase-transition temperature of the dinitro compound is K (172°) M1  
 (185) M2 (187) I between the crystalline and liquid phases.

IT **87695-81-6P 186553-61-7P 186553-62-8P**  
**186553-63-9P**  
 (characterization of 9-(p-substituted  
 benzylidenehydrazono)fluorenes)

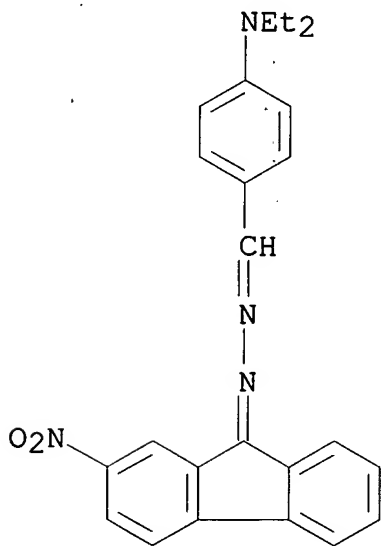
RN 87695-81-6 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-, 9H-fluoren-9-ylidenehydrazone  
(9CI) (CA INDEX NAME)

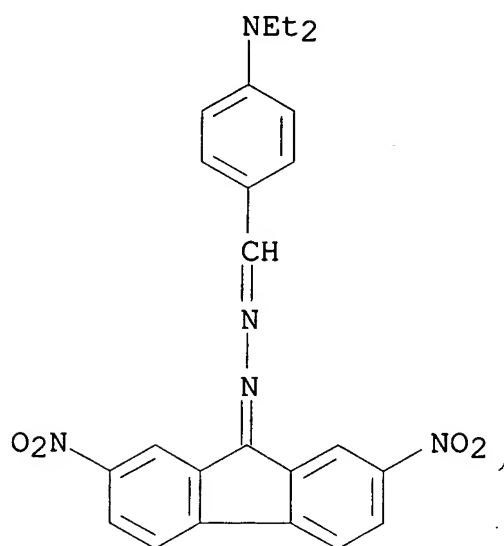


RN 186553-61-7 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-, (2-nitro-9H-fluoren-9-ylidene)hydrazone (9CI) (CA INDEX NAME)

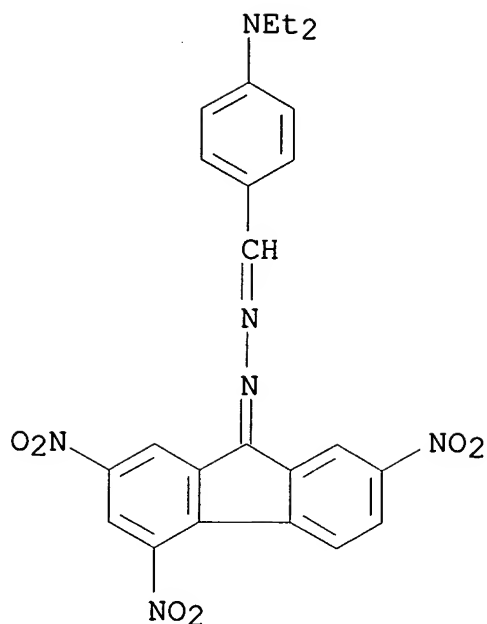


RN 186553-62-8 CAPLUS  
 CN Benzaldehyde, 4-(diethylamino)-, (2,7-dinitro-9H-fluoren-9-ylidene)hydrazone (9CI) (CA INDEX NAME)



RN 186553-63-9 CAPLUS  
 CN Benzaldehyde, 4-(diethylamino)-, (2,4,7-trinitro-9H-fluoren-9-ylidene)hydrazone (9CI) (CA INDEX NAME)





CC 22-13 (Physical Organic Chemistry)

Section cross-reference(s): 75

IT 52211-82-2P **87695-81-6P** 186553-48-0P 186553-52-6P

186553-59-3P 186553-60-6P **186553-61-7P**

**186553-62-8P 186553-63-9P**

(characterization of 9-(p-substituted  
benzylidenehydrazono)fluorenes)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L12 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:523772 CAPLUS

DOCUMENT NUMBER: 113:123772

TITLE: Electrophotographic photoconductor containing  
trisazo pigment

INVENTOR(S): Kashizaki, Yoshiro; Anayama, Hideki

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

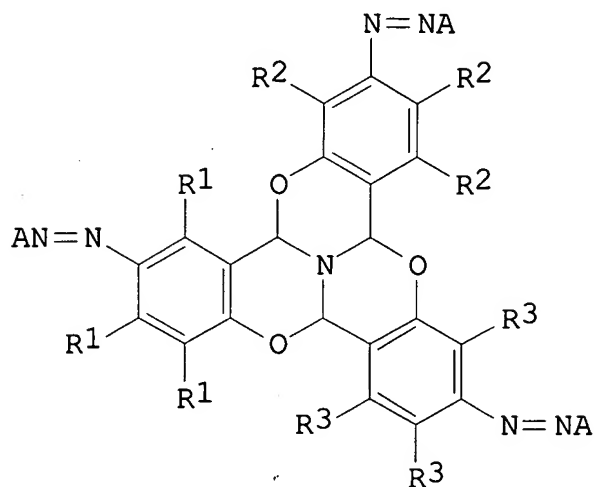
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND -----	DATE -----	APPLICATION NO. -----	DATE
JP 01100559	A2	19890418	JP 1987-257376	1987 1014
PRIORITY APPLN. INFO.:				JP 1987-257376 1987 1014

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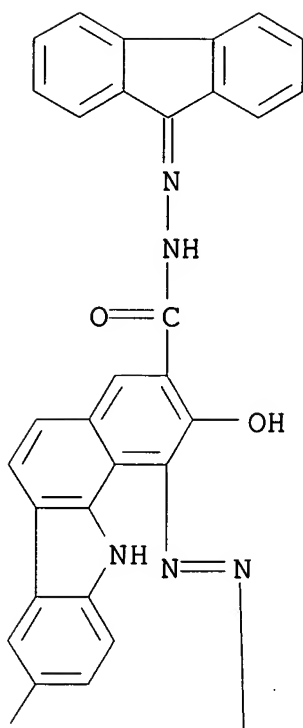
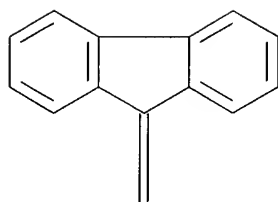
AB An electrophotog. photoconductor has a photosensitive layer containing a charge-generating trisazo pigment of the formula I. (R1-R3 = H, alkyl, halo; A = coupler residue having phenolic OH).

IT **129284-37-3**  
(electrophotog. charge-generating agent)

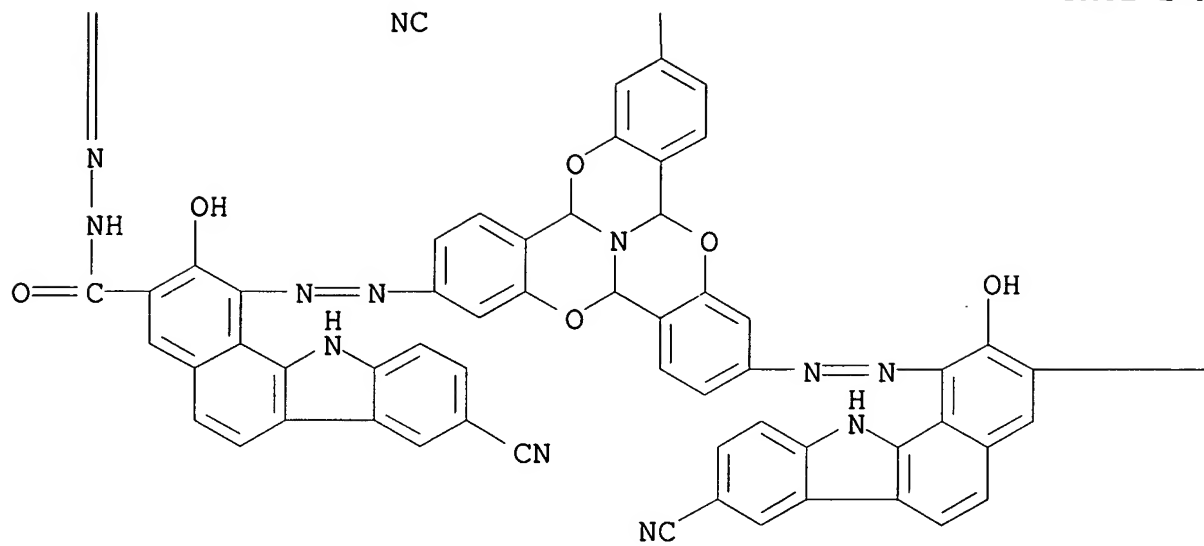
RN 129284-37-3 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[5aH,10aH,15aH-5,10,15-trioxa-14c-azabenz[a]naphth[1,2,3-de]anthracene-3,8,13-triyltris(azo)]tris[8-cyano-2-hydroxy-, tris(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

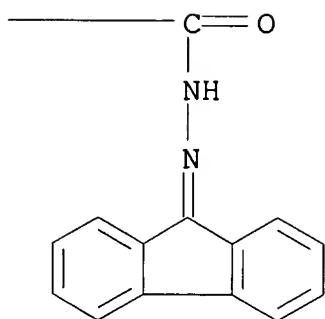
PAGE 1-A



PAGE 2-A



PAGE 2-B



IC ICM G03G005-06  
ICS C09B035-378  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 126619-71-4 126619-72-5 126619-73-6 126619-74-7  
126619-75-8 126619-76-9 126619-77-0 126619-78-1  
126619-79-2 126619-80-5 126619-81-6 126619-82-7  
126619-83-8 126619-84-9 126619-85-0 126619-86-1  
126619-87-2 126619-88-3 126619-89-4 126619-90-7  
126619-91-8 126619-92-9 126619-93-0 126619-94-1  
126619-95-2 126619-96-3 126619-97-4 126619-98-5  
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126620-03-9 126620-04-0 126620-05-1 126620-06-2  
126620-07-3 126620-08-4 126620-09-5 126620-10-8  
126644-35-7 129284-36-2 **129284-37-3** 129284-38-4  
129284-39-5 129284-40-8 129284-41-9 129284-42-0  
129333-30-8

(electrophotog. charge-generating agent)

L12 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1990:88195 CAPLUS  
DOCUMENT NUMBER: 112:88195  
TITLE: Electrophotographic photoreceptor  
INVENTOR(S): Miyazaki, Hajime; Anayama, Hideki  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

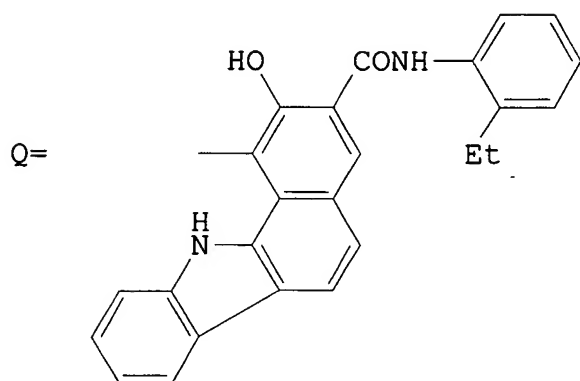
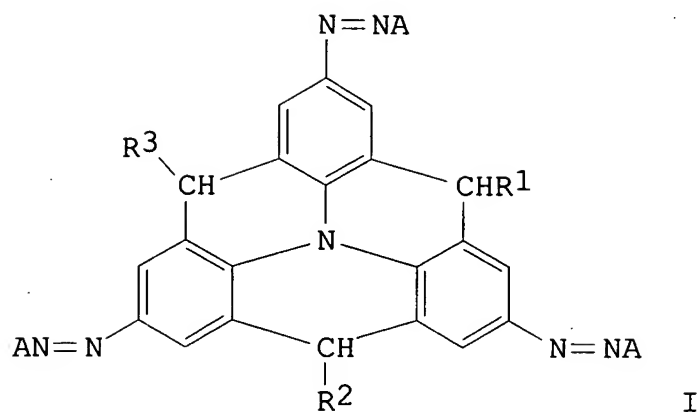
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01076061	A2	19890322	JP 1987-232094	1987 0918

PRIORITY APPLN. INFO.: JP 1987-232094

1987  
0918

1987  
0918

GI



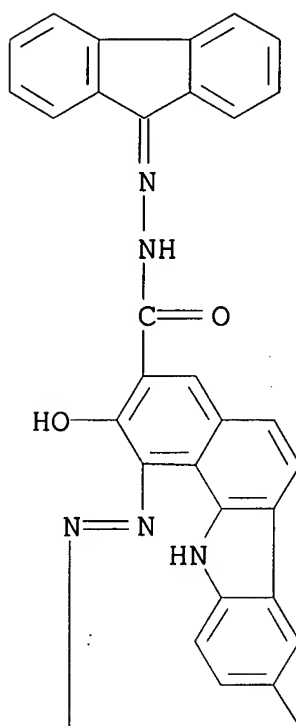
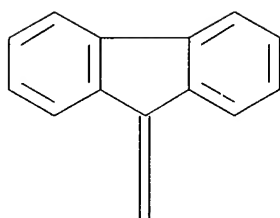
AB In the title photoreceptor, a photoconductive layer contains I [R1-R3 = H, halo, (substituted) alkyl, etc.; A = phenolic coupler]. I is used as a charge generator. This photoreceptor shows improved sensitivity. I (R1 = R2 = R3 = H, A = Q) was used as an example of I.

IT **124408-16-8**  
(electrophotog. photoreceptor material)

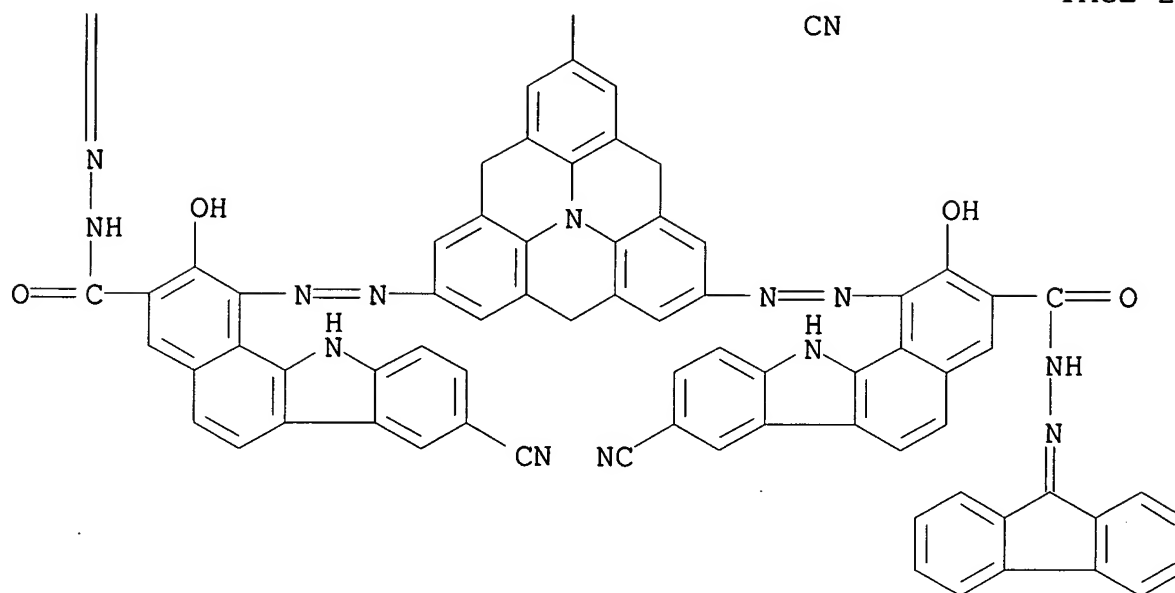
RN 124408-16-8 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[4H,8H,12H-benzo[1,9]quinolizino[3,4,5,6,7-defg]acridine-2,6,10-triyltris(azo)]tris[8-cyano-2-hydroxy-, tris(9H-fluorene-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

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IC ICM G03G005-06  
ICS C09B035-378  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): **41**  
IT 124408-08-8 124408-09-9 124408-10-2 124408-11-3  
124408-12-4 124408-13-5 124408-14-6 124408-15-7  
**124408-16-8** 124408-17-9 124408-18-0 124408-19-1  
124408-20-4 124408-21-5 124408-22-6 124408-23-7  
124408-24-8 124408-25-9 124408-26-0 124408-27-1  
124408-28-2 124408-29-3 124408-30-6 124408-31-7  
124451-18-9

(electrophotog. photoreceptor material)

L12 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1990:45619 CAPLUS  
DOCUMENT NUMBER: 112:45619  
TITLE: Electrophotographic photoreceptor  
INVENTOR(S): Anayama, Hideki; Miyazaki, Hajime  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

USHA SHRESTHA REM 4B28



FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

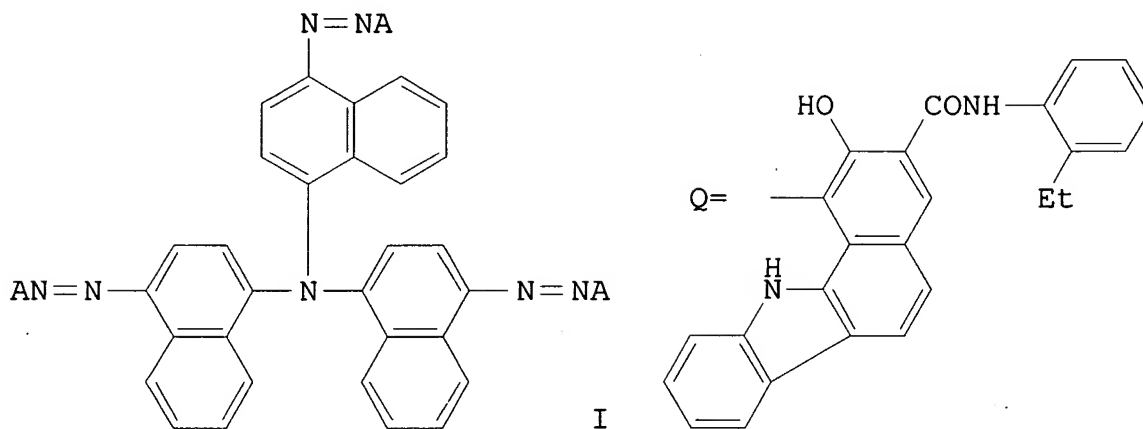
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01076062	A2	19890322	JP 1987-232096	1987 0918

PRIORITY APPLN. INFO.:

JP 1987-232096

1987  
0918

GI



AB In the title photoreceptor, a photoconductive layer contains I (A = phenolic coupler). I is used as a charge generator. The photoreceptor shows improved sensitivity and stable chargeability. I (A = Q) was used as an example of I as a charge generator.

IT **124408-46-4**

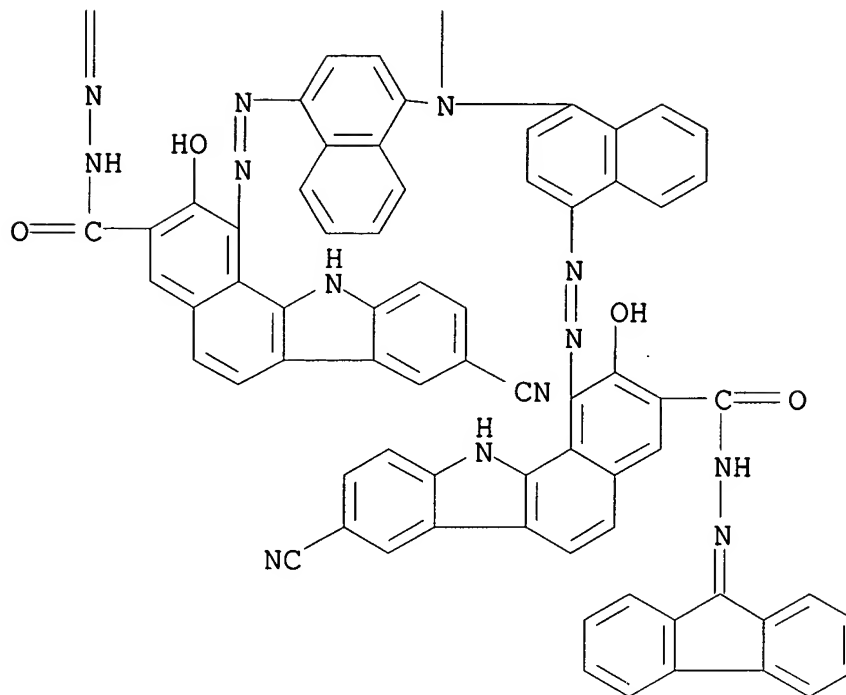
(electrophotog. photoreceptor material)

RN 124408-46-4 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[nitrilotris(4,1-naphthalenediylazo)]tris[8-cyano-2-hydroxy-, tris(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

O=C(NC(=O)c1ccc2c(c1)c3ccccc3[nH]2)c4ccc5c(c4)c6ccccc6[nH]5C#N

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IC ICM G03G005-06  
ICS C09B035-378  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): **41**  
IT 124408-33-9 124408-34-0 124408-35-1 124408-36-2  
124408-37-3 124408-38-4 124408-39-5 124408-40-8  
124408-41-9 124408-42-0 124408-43-1 124408-44-2  
124408-45-3 **124408-46-4** 124408-47-5 124408-48-6  
124408-49-7 124408-50-0 124408-51-1 124408-52-2  
124408-53-3 124408-54-4 124408-55-5 124408-56-6  
124424-93-7 124424-94-8 124424-95-9 124559-50-8  
124786-23-8  
(electrophotog. photoreceptor material)

L12 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1990:28068 CAPLUS  
DOCUMENT NUMBER: 112:28068  
TITLE: Electrophotographic photoreceptor containing  
trisazoheterocycle  
INVENTOR(S): Miyazaki, Hajime; Anayama, Hideki

PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01076060	A2	19890322	JP 1987-232093	1987 0918

PRIORITY APPLN. INFO.: JP 1987-232093

1987  
0918

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
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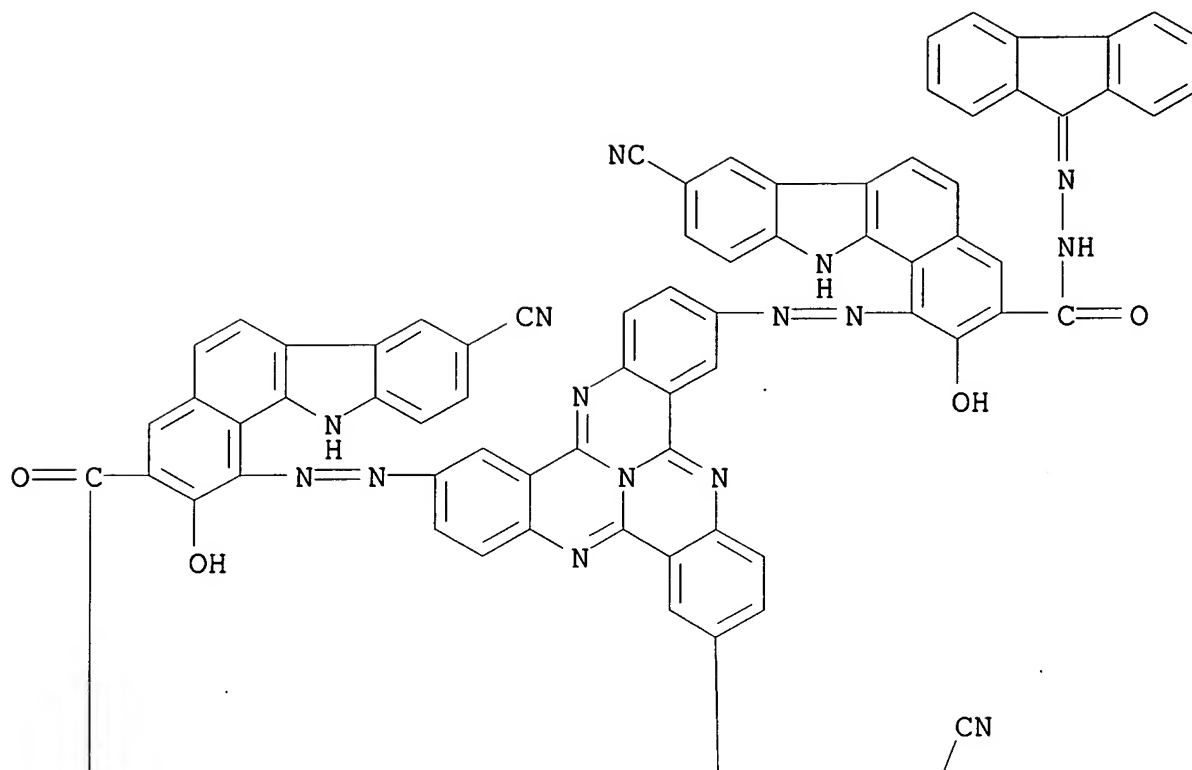
AB In the title photoreceptor, a photoconductive layer contains trisazoheterocycle I [R1-R9 = H, (substituted) alkyl, halo; A = phenolic coupler]. This photoreceptor shows improved sensitivity and stable chargeability. I (R1-R9 = H, A = Q) was used as an example of I as a charge generator.

IT **124407-94-9**  
 (electrophotog. photoreceptor material)

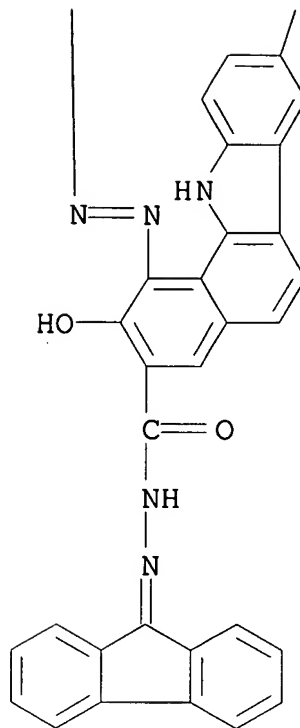
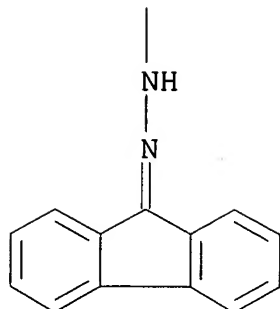
RN 124407-94-9 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[3,8,13-tricycloquinazolinetriyltris(azo)]tris[8-cyano-2-hydroxy-, tris(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

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IC ICM G03G005-06  
ICS C09B035-378  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): **41**  
IT 124407-83-6 124407-84-7 124407-85-8 124407-86-9  
124407-87-0 124407-88-1 124407-89-2 124407-90-5  
124407-91-6 124407-92-7 124407-93-8 **124407-94-9**  
124407-95-0 124407-96-1 124407-97-2 124407-98-3  
124407-99-4 124408-00-0 124408-01-1 124408-02-2  
124408-03-3 124408-04-4 124408-05-5 124424-91-5  
124424-92-6

(electrophotog. photoreceptor material)

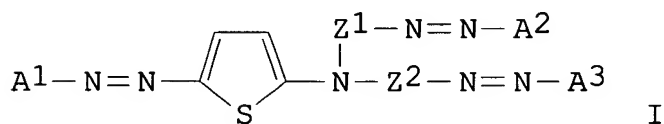
L12 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1989:104886 CAPLUS  
DOCUMENT NUMBER: 110:104886  
TITLE: Organic composite electrophotographic  
photoreceptor containing trisazo pigment  
INVENTOR(S): Matsumoto, Masakazu; Takiguchi, Takao

USHA SHRESTHA REM 4B28

PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63148267	A2	19880621	JP 1986-294719	1986 1212
PRIORITY APPLN. INFO.:			JP 1986-294719	1986 1212

OTHER SOURCE(S): MARPAT 110:104886  
 GI



AB The title photoreceptor has a photosensitive layer containing a trisazo pigment I (Z1, Z2 = thiophenylene, arylene; A1-A3 = coupler residue having phenolic OH). The photoreceptor shows improved sensitivity and durability.

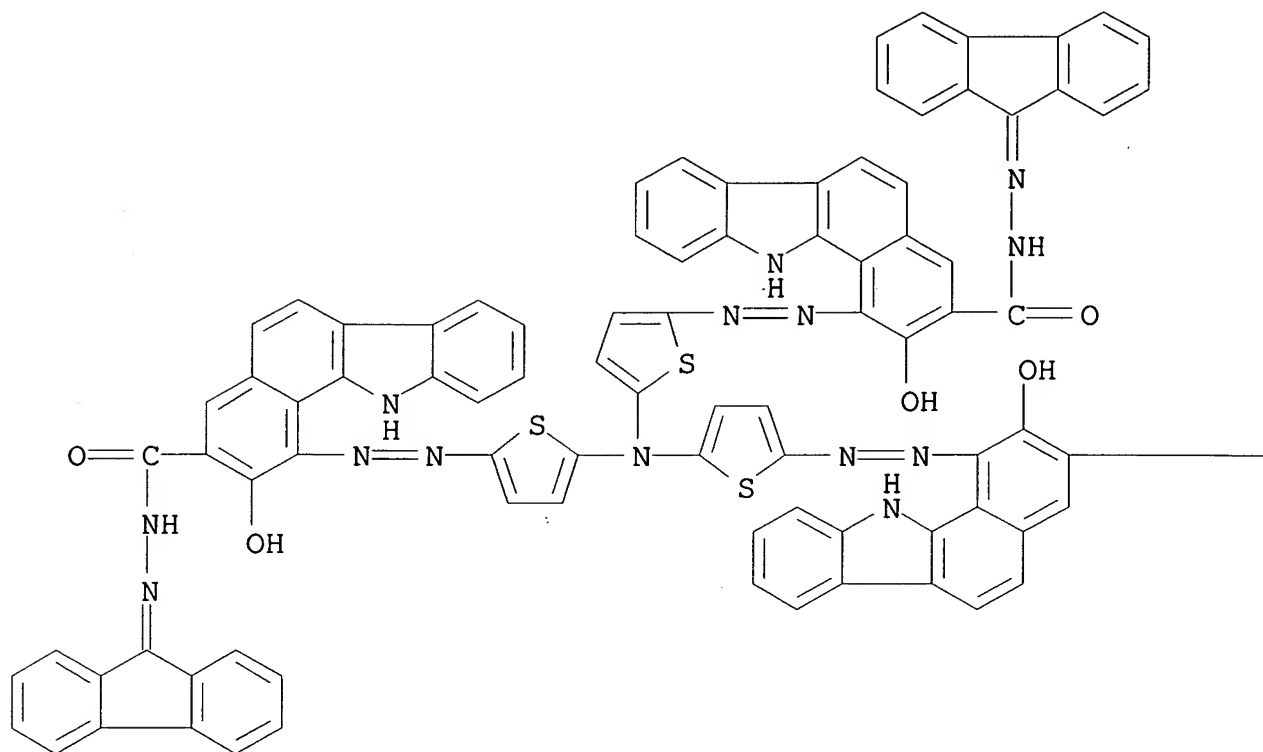
IT **119318-22-8 119318-28-4**

(electrophotog. charge-generating agent)

RN 119318-22-8 CAPLUS

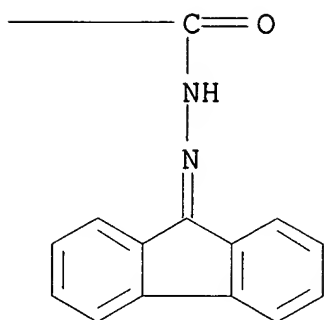
CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[nitrilotris(5,2-thiophenediylazo)]tris[2-hydroxy-, tris(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

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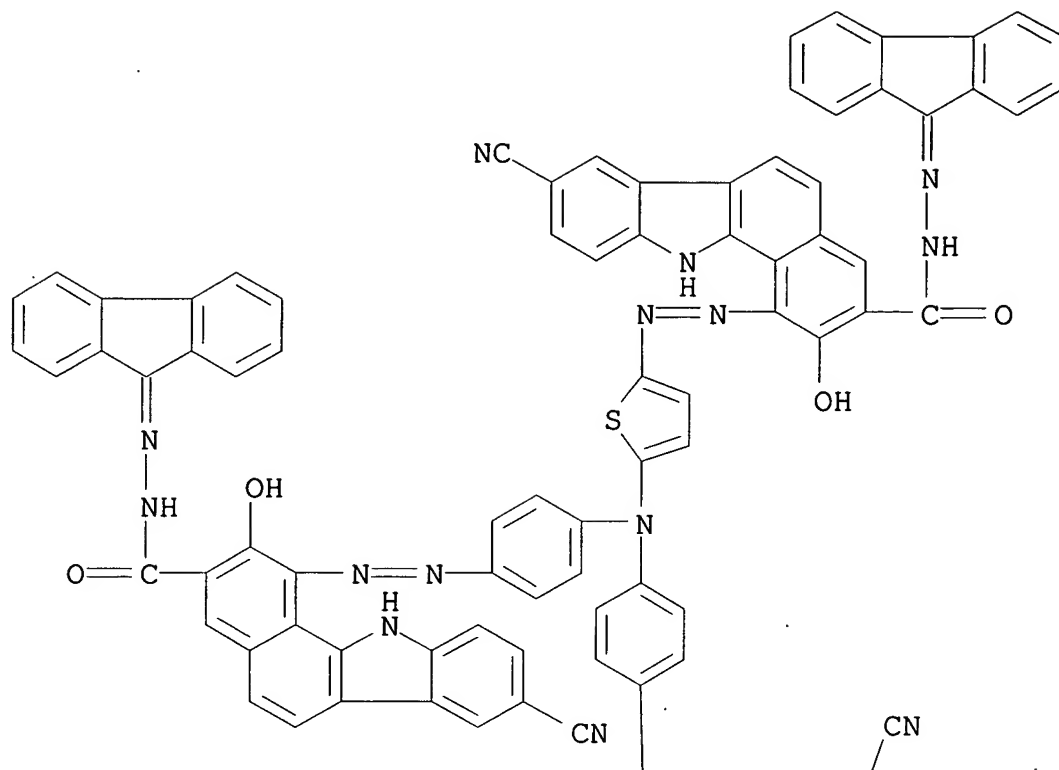


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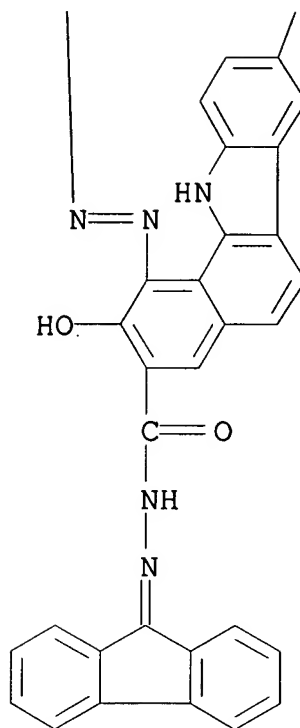


RN 119318-28-4 CAPLUS  
 CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[[[5-[[8-cyano-3-  
 [(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-  
 benzo[a]carbazol-1-yl]azo]-2-thienyl]imino]bis(4,1-  
 phenyleneazo)]bis[8-cyano-2-hydroxy-, bis(9H-fluoren-9-  
 ylidenehydrazide) (9CI) (CA INDEX NAME)

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IC ICM G03G005-06  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 119286-12-3 119286-13-4 119286-14-5 119286-15-6  
 119286-16-7 119286-17-8 119286-18-9 119286-19-0  
 119286-20-3 119286-21-4 119286-22-5 119286-23-6  
 119286-24-7 119286-25-8 119286-26-9 119286-27-0  
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 119286-36-1 119286-37-2 119286-38-3 119286-39-4  
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 119318-20-6 119318-21-7 **119318-22-8** 119318-23-9  
 119318-25-1 119318-26-2 119318-27-3 **119318-28-4**  
 119318-29-5 119335-78-3 119335-79-4  
 (electrophotog. charge-generating agent)

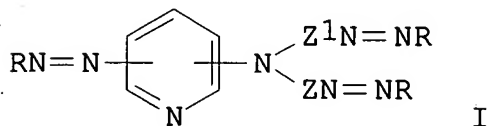
L12 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

USHA SHRESTHA REM 4B28

ACCESSION NUMBER: 1988:580363 CAPLUS  
 DOCUMENT NUMBER: 109:180363  
 TITLE: Electrophotographic photoreceptors containing trisazo pigments  
 INVENTOR(S): Matsumoto, Masakazu; Takiguchi, Takao; Takai, Hideyuki  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 63027850	A2	19880205	JP 1986-172580	1986 0722
JP 04080386	B4	19921218		
US 4810607	A	19890307	US 1987-73221	1987 0714
PRIORITY APPLN. INFO.:			JP 1986-172580	A 1986 0722

GI

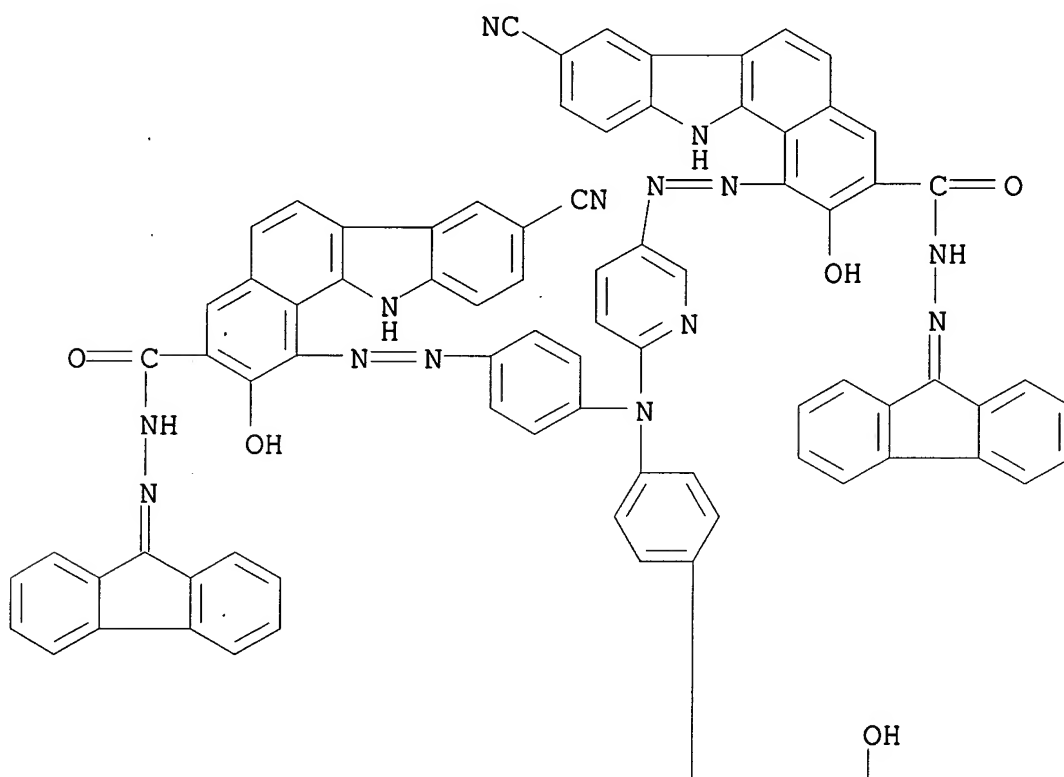


AB The title electrophotog. photoreceptors contain a trisazo pigment I (Z, Z1 = divalent pyridine moiety, arylene; R = phenolic OH group-containing coupler moiety). The photoreceptors show good sensitivity toward visible and near IR light and hence can be used in conventional copying machines and semiconductor laser printers.

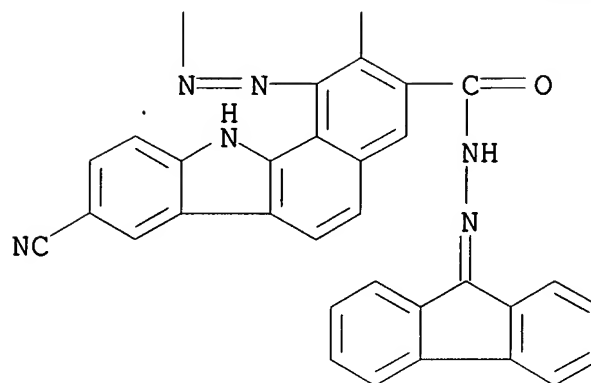
IT **116995-09-6 117008-81-8**  
 (electrophotog. charge carrier-generating pigment)

RN 116995-09-6 CAPLUS  
 CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[[[5-[[8-cyano-3-  
 [(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-  
 benzo[a]carbazol-1-yl]azo]-2-pyridinyl]imino]bis(4,1-  
 phenyleneazo)]bis[8-cyano-2-hydroxy- (9CI) (CA INDEX NAME)

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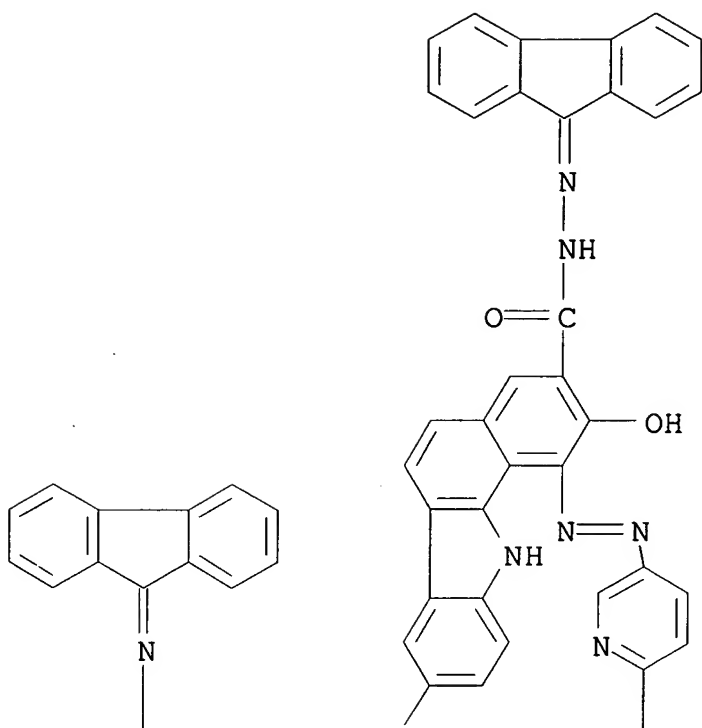


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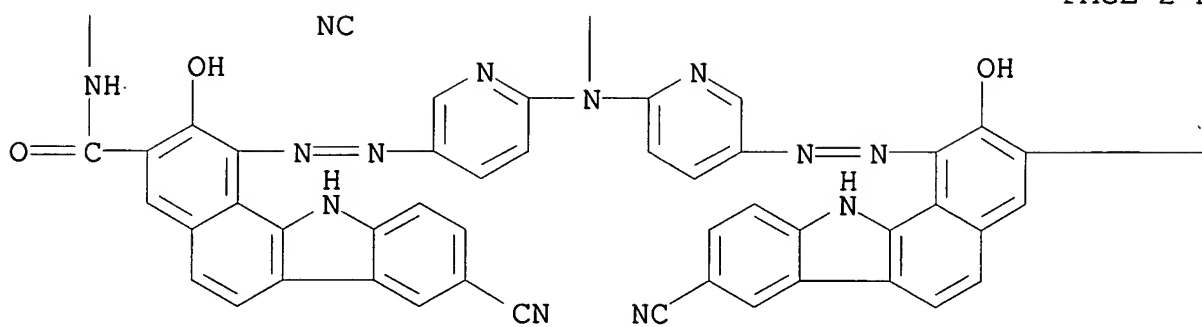


RN 117008-81-8 CAPLUS  
 CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1',1''-[nitrilotris(2,5-pyridinediylazo)]tris[8-cyano-2-hydroxy-, tris(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

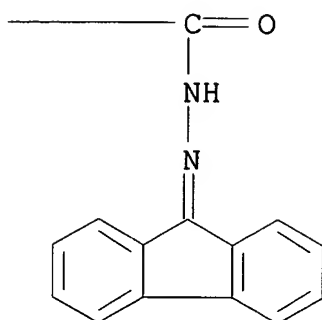
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IC ICM G03G005-06  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 116994-99-1 116995-00-7 116995-01-8 116995-02-9  
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 116995-07-4 116995-08-5 **116995-09-6** 116995-10-9  
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 117008-75-0 117008-76-1 117008-77-2 117008-78-3  
 117008-79-4 117008-80-7 **117008-81-8** 117008-82-9  
 117008-84-1 117008-85-2 117036-80-3 117036-81-4  
 117036-82-5 117036-83-6 117036-84-7 117036-85-8  
 117539-81-8

(electrophotog. charge carrier-generating pigment)

L12 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:464250 CAPLUS

DOCUMENT NUMBER: 109:64250

TITLE: Method for electrophotographic development

INVENTOR(S): Shigeta, Kunio; Masaki, Hironari; Takagiwa, Hiroyuki; Tsujita, Kenji; Takahashi, Jiro

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

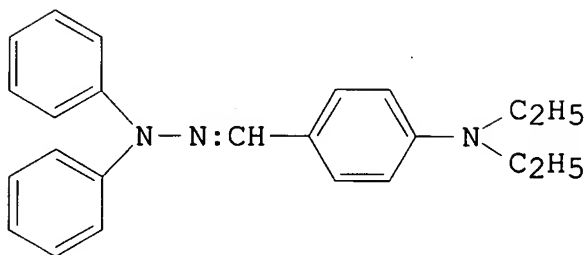
USHA SHRESTHA REM 4B28



DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62293253	A2	19871219	JP 1986-135899	1986 0613
PRIORITY APPLN. INFO.:			JP 1986-135899	1986 0613

GI



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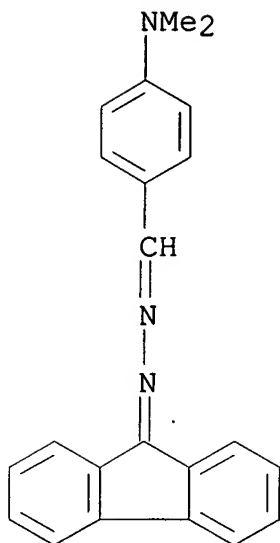
AB The title method is characterized by the use of a toner >0.5 g/cm<sup>3</sup> in bulk d. and containing a fluidizer >20 μm in average particle diameter with a photoreceptor which has a surface layer containing a hydrazone and/or a styryl compound. Thus, a mixture of a toner powder (from a polyester 100, C black 10, and Viscol 660P 3 weight parts) 100 and hydrophobic TiO<sub>2</sub> 0.5 weight part was used with a carrier for an electrophotog. photoreceptor containing I to produce fog-free images with good reproducibility.

IT **75159-08-9**

(electrophotog. photoreceptor containing)

RN 75159-08-9 CAPLUS

CN Benzaldehyde, 4-(dimethylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



IC ICM G03G009-08  
ICS G03G009-08  
ICA G03G005-06; G03G015-08; G03G015-28  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 2564-18-3 68189-23-1 **75159-08-9** 84285-21-2  
84746-55-4  
(electrophotog. photoreceptor containing)

L12 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1988:464249 CAPLUS  
DOCUMENT NUMBER: 109:64249  
TITLE: Method for electrophotographic development  
INVENTOR(S): Shigeta, Kunio; Masaki, Hironari; Takagiwa,  
Hiroyuki; Tsujita, Kenji; Takahashi, Jiro  
PATENT ASSIGNEE(S): Konica Co., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28

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JP 62293251

A2

19871219

JP 1986-135896

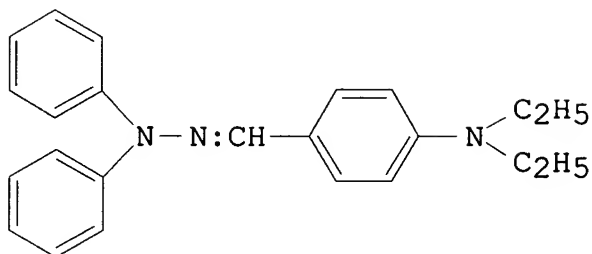
1986  
0613

PRIORITY APPLN. INFO.:

JP 1986-135896

1986  
0613

GI



I

AB The title method is characterized by the use of a toner >0.35 g/cm<sup>3</sup> in bulk d. and containing a fluidizer >20 μm in average particle

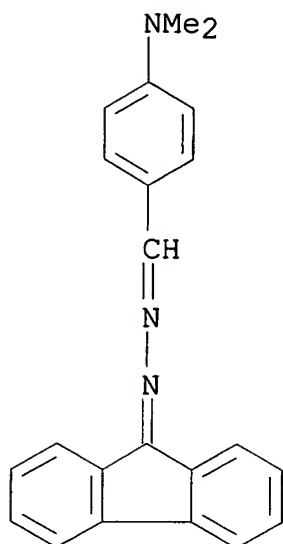
diameter and a fatty acid metal salt with a photoreceptor having a surface layer containing a hydrazone and/or a styryl compound. Thus, a toner powder (from a polyester 100, C black 10, and Viscol 660P 3 weight parts) 100, hydrophobic TiO<sub>2</sub> particles 0.6, and Zn stearate 0.05 weight part were mixed. The mixed toner was used with a carrier for an electrophotog. photoreceptor containing I to produce sharp fog-free images.

IT 75159-08-9

(electrophotog. photoconductor containing)

RN 75159-08-9 CAPLUS

CN Benzaldehyde, 4-(dimethylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



IC ICM G03G009-08  
 ICS G03G009-08  
 ICA G03G005-06; G03G015-08  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 2564-18-3 68189-23-1 **75159-08-9** 84285-21-2  
 84746-55-4  
 (electrophotog. photoconductor containing)

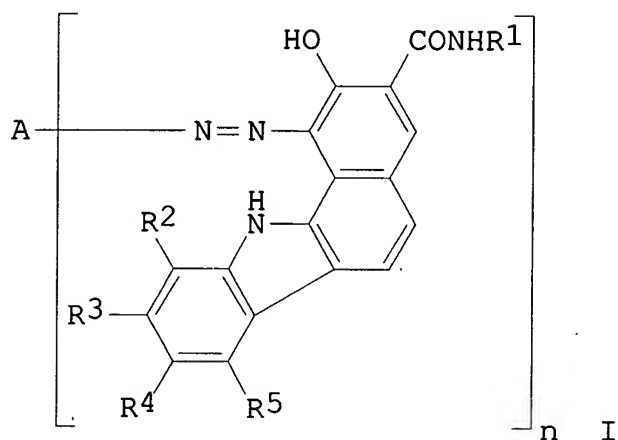
L12 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1988:29377 CAPLUS  
 DOCUMENT NUMBER: 108:29377  
 TITLE: Electrophotographic photoreceptors  
 INVENTOR(S): Matsumoto, Masakazu; Umehara, Masashige;  
 Takiguchi, Takao; Ishikawa, Shozo  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 151 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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USHA SHRESTHA REM 4B28

JP 62147463	A2	19870701	JP 1985-288179	1985
				1220
JP 05049229	B4	19930723		
PRIORITY APPLN. INFO.:			JP 1985-288179	1985
				1220

GI



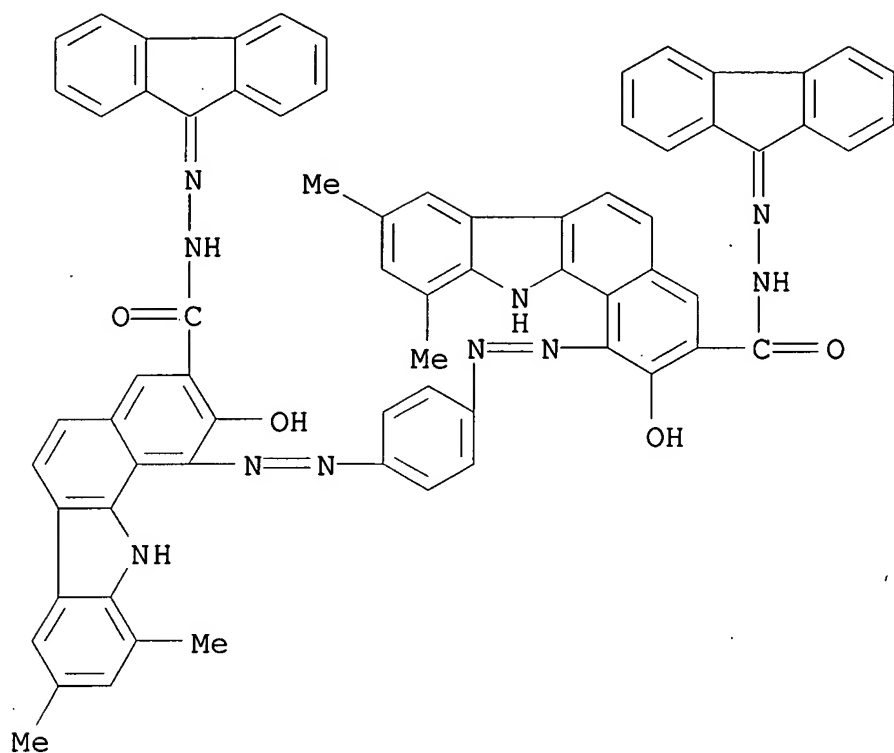
AB The claimed electrophotog. photoreceptor contains a compound of the formula I (A = an aromatic or heterocyclic moiety; R1 = alkyl, aryl, aralkyl, N:CR6R7; R2-R5 = H, halo, OH, NO2, CF3, CN, alkyl, alkoxy, aryl, aralkyl, NH2; R6, R7 = H, alkyl, aralkyl, heterocyclyl; R2R3, R3R4, R4R5, and R6R7 in combination may form rings; n = 2-4). The photoreceptor shows excellent sensitivity in the visible and near IR region; hence it is useful for laser printers and copiers.

IT **111785-34-3 111785-39-8**

(electrophotog. charge carrier generating pigments)

RN 111785-34-3 CAPLUS

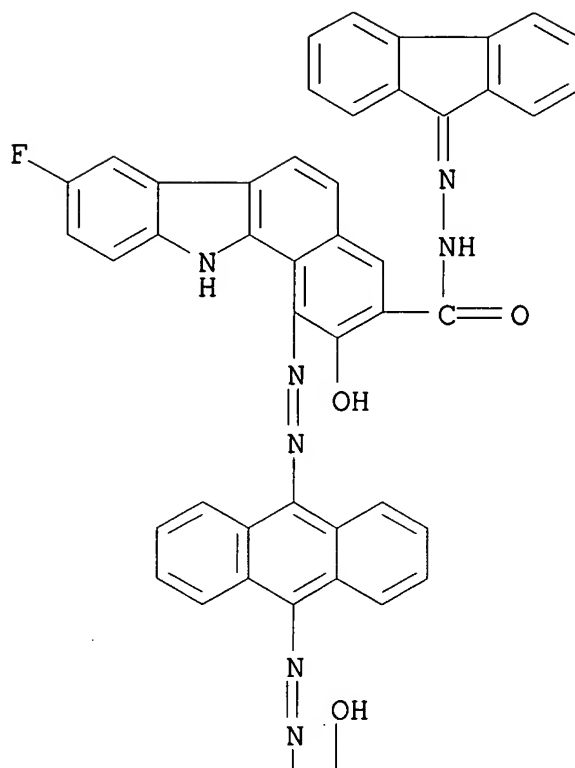
CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[1,4-phenylenebis(azo)]bis[2-hydroxy-8,10-dimethyl-, bis(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)



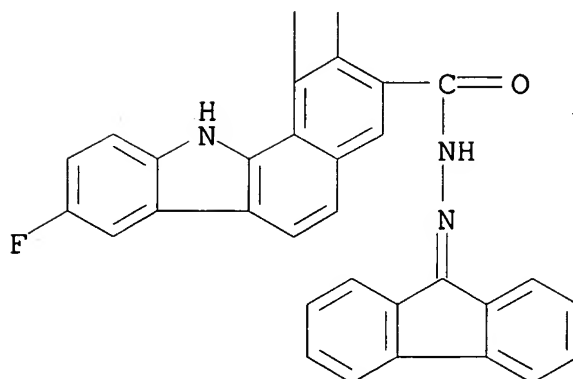
RN 111785-39-8 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[9,10-anthracenediylbis(azo)]bis[8-fluoro-2-hydroxy-, bis(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

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IC ICM G03G005-06

USHA SHRESTHA REM 4B28

CC	74-3 (Radiation Chemistry, <b>Photochemistry</b> , and			
	<b>Photographic</b> and Other Reprographic Processes)			
IT	111785-00-3	111785-01-4	111785-02-5	111785-03-6
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111843-94-8 111843-95-9 111843-96-0 111843-97-1  
111843-98-2 111843-99-3 111844-00-9 111844-01-0  
112100-00-2

(electrophotog. charge carrier generating pigments)

L12 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:415493 CAPLUS

DOCUMENT NUMBER: 107:15493

TITLE: Electrophotographic charge-generating trisazo photoconductors

INVENTOR(S): Matsumoto, Masakazu; Miyazaki, Hajime; Yamashita, Masataka

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61281243	A2	19861211	JP 1985-122756	1985 0607
JP 03080303	B4	19911224	JP 1985-122756	1985 0607

PRIORITY APPLN. INFO.:

AB The trisazo photoconductor has the formula A-N:N-Z1-N(NO)-Z2-N:N-Z3-N:N-A (Z1-Z3 = phenylene, aromatic condensed polycyclylene, heterocyclylene; A = coupler residue having a phenolic OH group) (e.g., Z1 = Z2 = Z3 = 1,4-phenylene; A = coupling residue from 3-hydroxy-2-naphthoic acid anilide). It provides organic composite photoconductors with improved sensitivity.

IT **108406-43-5**

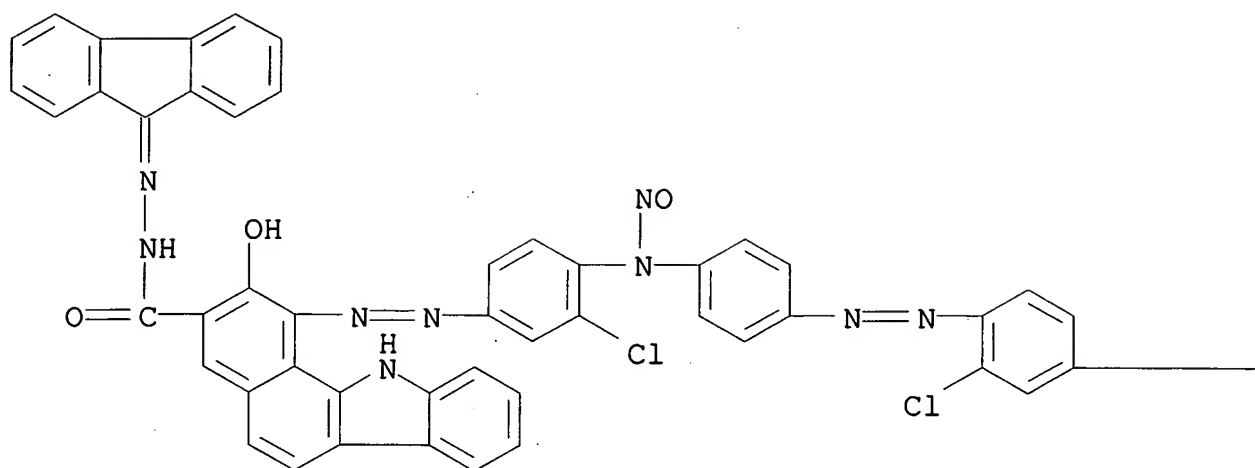
(electrophotog. charge-generating trisazo photoconductor, with improved sensitivity)

RN 108406-43-5 CAPLUS

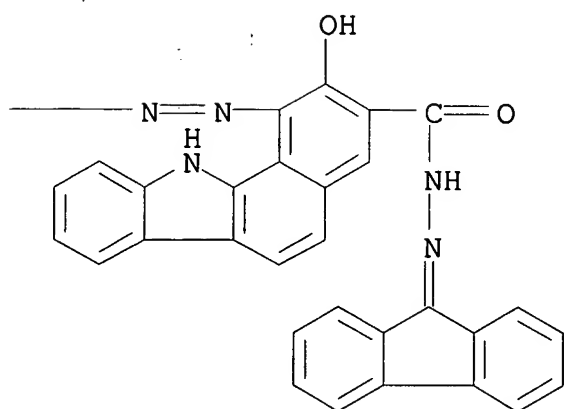
CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1-[[3-chloro-4-[[4-[[2-chloro-4-[[3-[(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-benzo[a]carbazol-1-yl]azo]phenyl]azo]phenyl]nitrosoamino]phenyl]azo]-2-hydroxy-, 9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX

NAME)

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PAGE 1-B



USHA SHRESTHA

REM 4B28

IC ICM G03G005-06  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 108406-25-3 108406-26-4 108406-27-5 108406-28-6  
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 108406-61-7 108427-40-3 108427-41-4 108427-42-5  
 108764-57-4

(electrophotog. charge-generating trisazo photoconductor, with improved sensitivity)

L12 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:224461 CAPLUS

DOCUMENT NUMBER: 106:224461

TITLE: Electrophotographic charge-generating trisazo photoconductors

INVENTOR(S): Matsumoto, Masakazu; Takiguchi, Takao; Umehara, Masashige; Yamashita, Masataka; Ishikawa, Shozo

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 31 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 61281244	A2	19861211	JP 1985-122757	1985 0607
JP 03080304	B4	19911224		
US 4702982	A	19871027	US 1986-865849	1986 0522

PRIORITY APPLN. INFO.: JP 1985-119116 A

1985  
0531

JP 1985-118978 A

1985  
0603

JP 1985-122757 A

1985  
0607

AB The trisazo photoconductor has the formula A-N:N-Z1-NH-Z2-N:N-Z3-N:N-A (Z1-Z3 = phenylene, aromatic condensed polycyclylene, heterocyclylene; A = coupler residue having a phenolic OH group) (e.g., Z1 = Z2 = Z3 = 1,4-phenylene; A = coupling residue from 3-hydroxy-2-naphthoic acid anilide). It provides organic composite photoconductors with improved sensitivity.

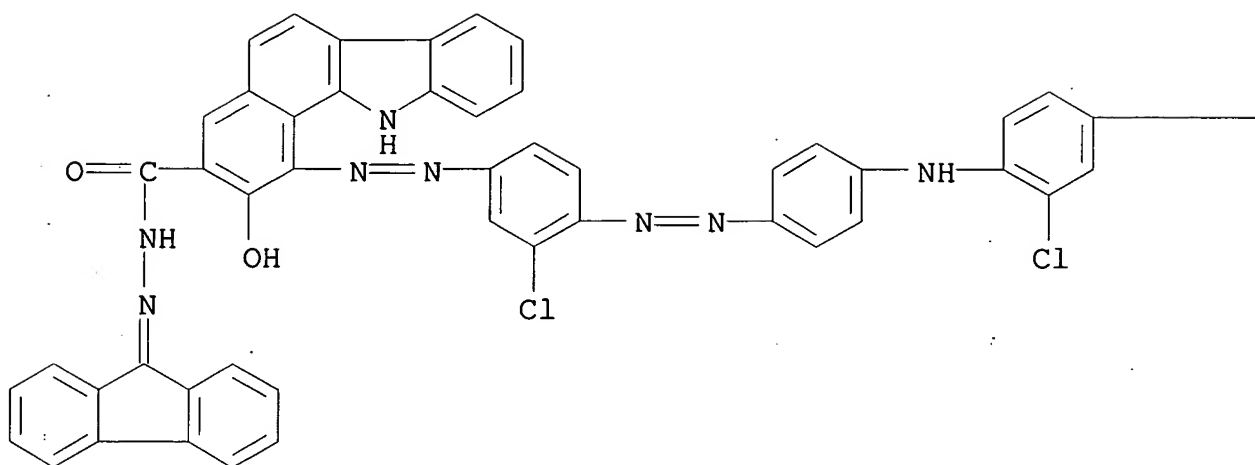
IT **108406-84-4**

(electrophotog. charge-generating trisazo photoconductor, with improved sensitivity)

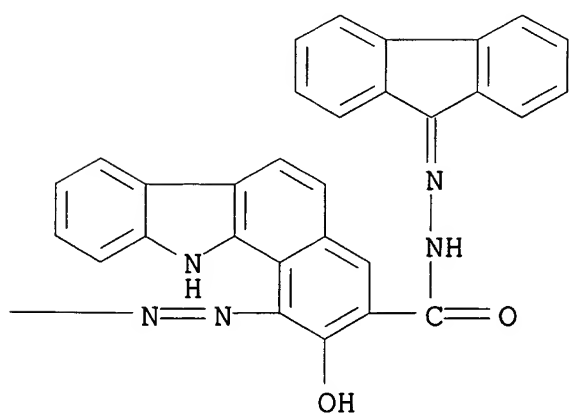
RN 108406-84-4 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1-[[3-chloro-4-[[4-[[2-chloro-4-[[3-[(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-benzo[a]carbazol-1-yl]azo]phenyl]amino]phenyl]azo]phenyl]azo]-2-hydroxy-, 9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX NAME)

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PAGE 1-B



IC ICM G03G005-06  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and

USHA SHRESTHA REM 4B28

**Photographic and Other Reprographic Processes)**

IT 108406-63-9 108406-64-0 108406-65-1 108406-66-2  
 108406-67-3 108406-68-4 108406-69-5 108406-70-8  
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 108406-99-1 108407-00-7 108407-01-8 108407-02-9  
 108427-43-6

(electrophotog. charge-generating trisazo photoconductor, with improved sensitivity)

L12 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:186429 CAPLUS

DOCUMENT NUMBER: 106:186429

TITLE: Electrophotographic photoreceptors containing charge-generating disazo compounds

INVENTOR(S): Matsumoto, Masakazu; Takiguchi, Takao; Umehara, Masashige; Yamashita, Masataka; Ishikawa, Shozo

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 61275850	A2	19861205	JP 1985-119116	1985 0531
JP 04017426	B4	19920325		
US 4702982	A	19871027	US 1986-865849	1986 0522

PRIORITY APPLN. INFO.: JP 1985-119116 A 1985  
0531

JP 1985-118978 A  
1985  
0603

JP 1985-122757 A  
1985  
0607

AB The disazo compound has the formula (AN:NZ1)N(NH)(Z2N:NA) (I; A = coupler residue having a phenolic OH group; Z1, Z2 = phenylene, polynuclear arylene, heterocyclylene). The photoreceptor was prepared by dispersing in a poly(vinyl butyral) binder a disazo compound of the formula I (Z1 = 1,4-naphthylene; Z2 = 1,4-phenylene; A = coupler residue from 3-hydroxy-2-naphthoic acid anilide) to give a charge-generating layer and dispersing in a PMMA binder a hydrazone compound to form a charge-transport layer. The photoreceptor shows improved sensitivity and stability.

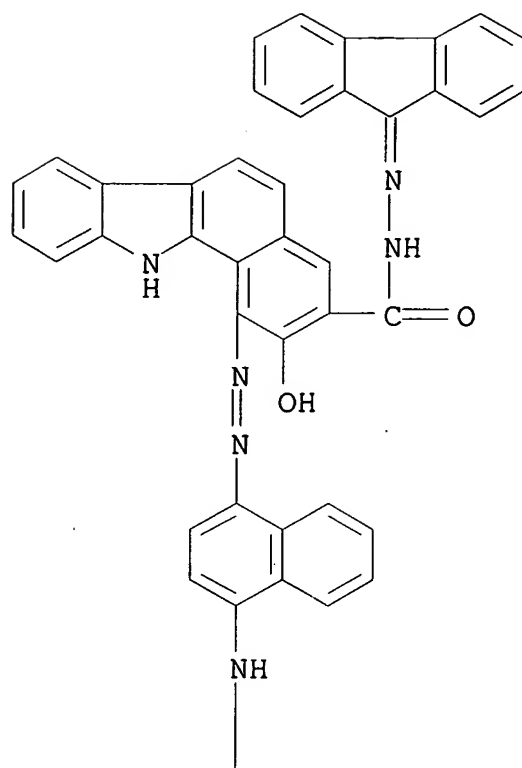
IT **108079-63-6**

(electrophotog. photoreceptor containing charge-generating compound from, with improved sensitivity and stability)

RN 108079-63-6 CAPLUS

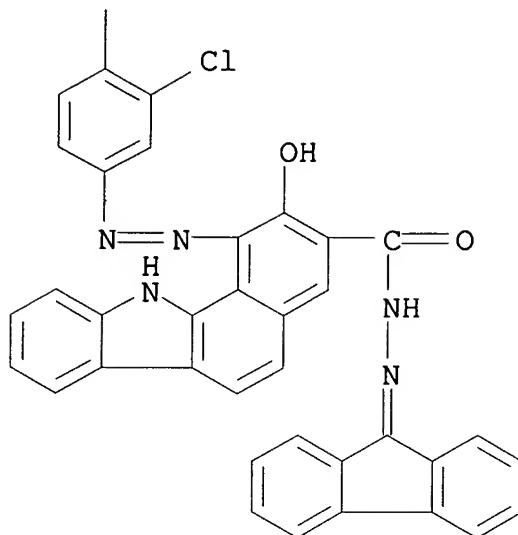
CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1-[[3-chloro-4-[[4-[[3-[(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-benzo[a]carbazol-1-yl]azo]-1-naphthalenyl]amino]phenyl]azo]-2-hydroxy-, 9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX NAME)

PAGE 1-A





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IC ICM G03G005-06  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 108079-61-4 108079-62-5 **108079-63-6** 108079-64-7  
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 108095-89-2 108095-90-5 108095-91-6 108095-92-7  
 108095-93-8 108118-21-4 108118-22-5 108118-23-6  
 (electrophotog. photoreceptor containing charge-generating compound  
 from, with improved sensitivity and stability)

L12 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1987:186428 CAPLUS  
 DOCUMENT NUMBER: 106:186428  
 TITLE: Electrophotographic photoreceptors containing  
 charge-generating disazo compounds  
 INVENTOR(S): Matsumoto, Masakazu; Yamashita, Masataka;  
 Miyazaki, Hajime  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

USHA SHRESTHA REM 4B28

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: Japanese  
 PATENT INFORMATION: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61275849	A2	19861205	JP 1985-119115	1985 0531
JP 04017425	B4	19920325	JP 1985-119115	1985 0531

PRIORITY APPLN. INFO.: JP 1985-119115

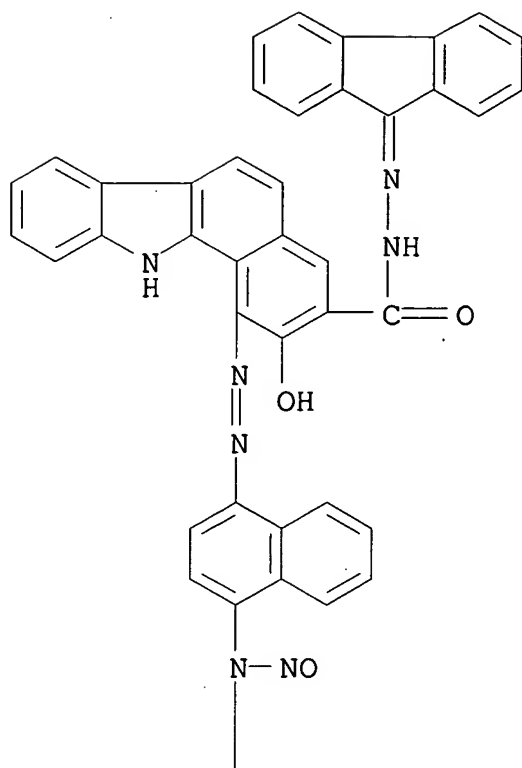
AB The charge-generating agent has the formula (AN:NZ1)N(NO) (Z2N:NA) (I; A = coupler residue having a phenolic OH group; Z1, Z2 = phenylene, polynuclear arylene, heterocyclene). A photoreceptor was prepared by dispersing in a poly(vinyl butyral) binder the disazo compound I (Z1 = 1,4-naphthylene; Z2 = 1,4-phenylene; A = coupler residue from 3-hydroxy-2-naphthoic acid anilide) to give a charge-generating layer and then dispersing in a PMMA binder a hydrazone compound to form a charge-transport layer. The photoreceptor shows improved sensitivity and stability.

IT **108095-57-4**  
 (electrophotog. photoreceptor with charge-generating layer containing, for improved sensitivity and stability)

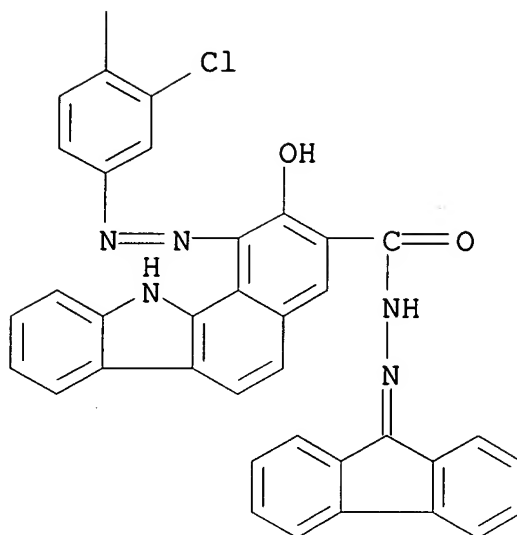
RN 108095-57-4 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1-[[3-chloro-4-[[4-[[3-[(9H-fluoren-9-ylidenehydrazino)carbonyl]-2-hydroxy-11H-benzo[a]carbazol-1-yl]azo]-1-naphthalenyl]nitrosoamino]phenyl]azo]-2-hydroxy-, 9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX NAME)

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PAGE 2-A



IC ICM G03G005-06  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 108095-37-0 108095-38-1 108095-39-2 108095-40-5  
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 108095-69-8 108095-70-1 108095-71-2 108095-72-3  
 108118-18-9 108118-19-0 108118-20-3

(electrophotog. photoreceptor with charge-generating layer  
 containing, for improved sensitivity and stability)

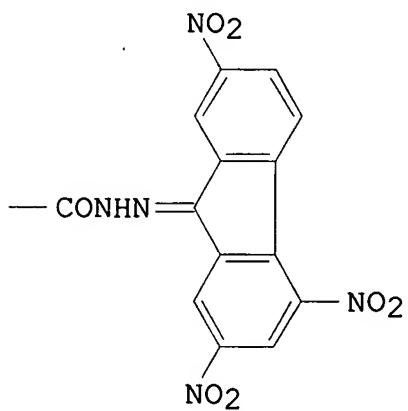
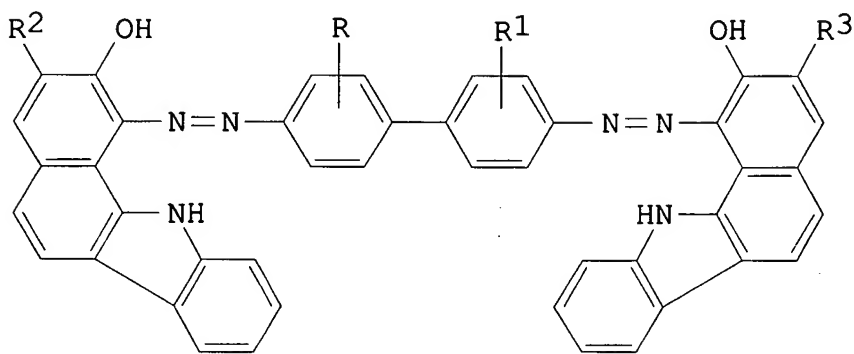
L12 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1986:216432 CAPLUS  
 DOCUMENT NUMBER: 104:216432  
 TITLE: Electrophotographic photoreceptors  
 INVENTOR(S): Takenochi, Osamu; Kawahara, Tatsuro; Tanaka,  
 Hisami  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF

USHA SHRESTHA REM 4B28

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 60146250	A2	19850801	JP 1984-2499	1984 0110
PRIORITY APPLN. INFO.:				JP 1984-2499 1984 0110

GI



AB Electrophotog. photoreceptors have a photoconductive layer containing a bisazo compound of the formula I [R, R1 = H, halo, alkyl, alkoxy, NO2; R2, R3 = CONR4R5, CONHNCR4R5 (R4, R5 = H, substituted or unsubstituted alkyl, a substituted or unsubstituted cyclic hydrocarbon group, a substituted or unsubstituted heterocyclic group, and R4 and R5 together may also form a ring)]. The photoreceptors show high photosensitivity over the entire visible spectrum, excellent mech. strength, little accumulation of residual charge, and little fluctuation of photosensitivity during repeated use. Thus, a dispersion comprised of a polyester resin (Vylon 200) 10, I (R, R1 = Me; R2, R3 = II) 10, and THF 80 parts was coated on an Al-laminated polyester film to give a 10-μ photosensitive layer. The obtained photoreceptor was charged and, after 10 s in the dark, exposed to a W lamp at 5 lx. The photosensitivity (the half decay of the surface voltage) was 18 lx-s.

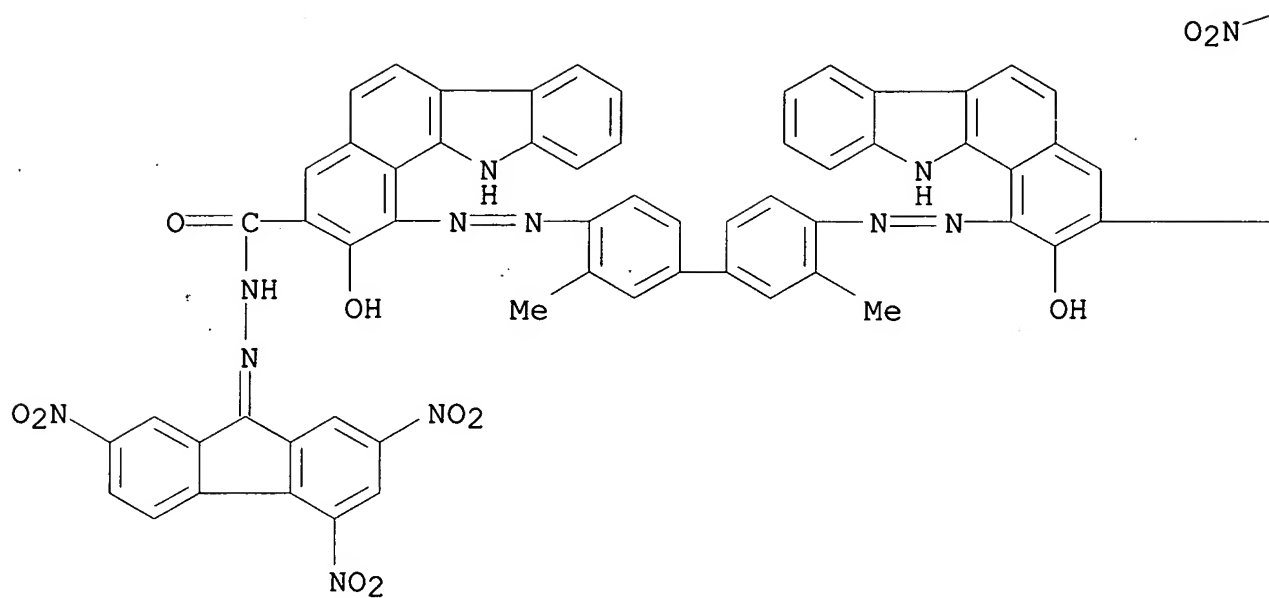
IT **99897-02-6**

(electrophotog. photoreceptor with photoconductive layer containing)

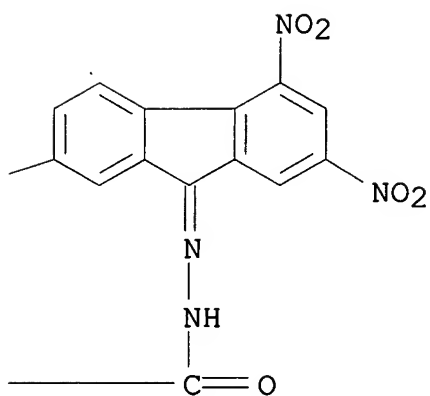
RN 99897-02-6 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2-hydroxy-, bis[(2,4,7-trinitro-9H-fluoren-9-ylidene)hydrazide] (9CI) (CA INDEX NAME)

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USHA SHRESTHA

REM 4B28

IC ICM G03G005-06  
ICS C09B035-039; H01L031-08  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 63737-48-4 99896-92-1 99896-93-2 99896-94-3 99896-95-4  
99896-96-5 99896-97-6 99896-98-7 99896-99-8 99897-00-4  
99897-01-5 **99897-02-6**  
(electrophotog. photoreceptor with photoconductive layer  
containing)

L12 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1986:99477 CAPLUS  
DOCUMENT NUMBER: 104:99477  
TITLE: Electrophotographic photoreceptors  
INVENTOR(S): Okunuki, Masami  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60177356	A2	19850911	JP 1984-33634	1984 0224
JP 04073783	B4	19921124	JP 1984-33634	1984 0224

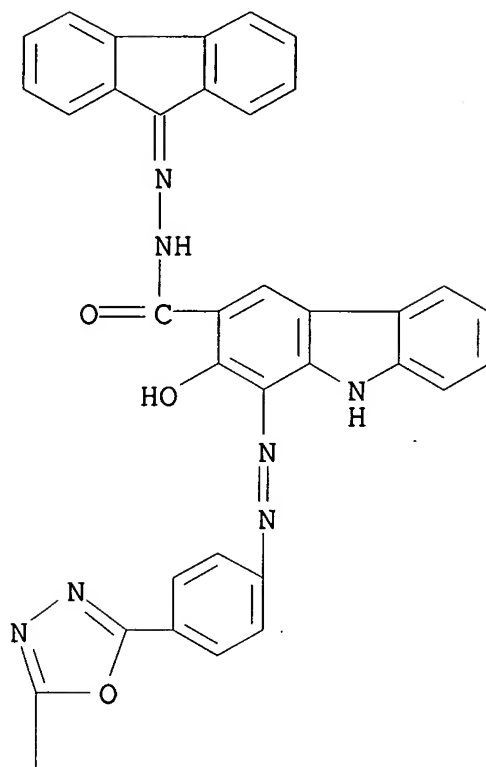
PRIORITY APPLN. INFO.: JP 1984-33634

GI For diagram(s), see printed CA Issue.  
AB The claimed photoreceptors containing an azo compound having an azo group(s) bonded to a coupler moiety of the formula I (R-R3 = H, halo, alkyl, aralkyl, amino, alkoxy, acyl; A = carbocyclic or heterocyclic aromatic ring). The azo compds. are especially useful as electrophotog. charge carrier-generating pigments.  
IT **100584-78-9 100632-01-7**  
(electrophotog. charge carrier-generating pigment)  
RN 100584-78-9 CAPLUS  
CN 9H-Carbazole-3-carboxylic acid, 1,1'-[1,3,4-oxadiazole-2,5-diylbis(4,1-phenyleneazo)]bis[2-hydroxy-, bis(9H-fluoren-9-

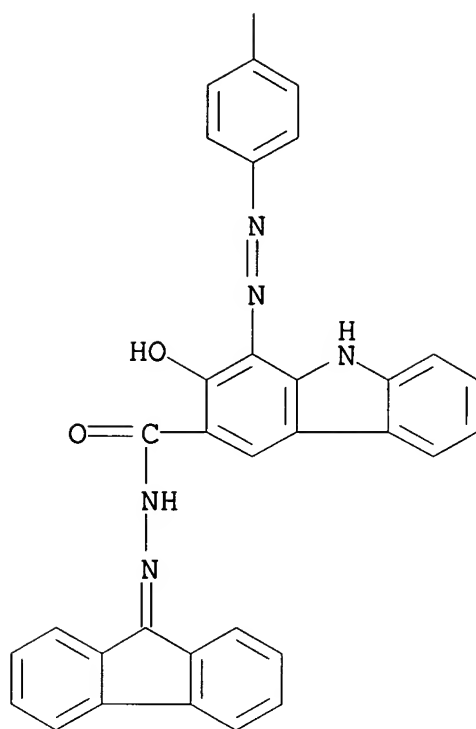


ylidenehydrazide) (9CI) (CA INDEX NAME)

PAGE 1-A

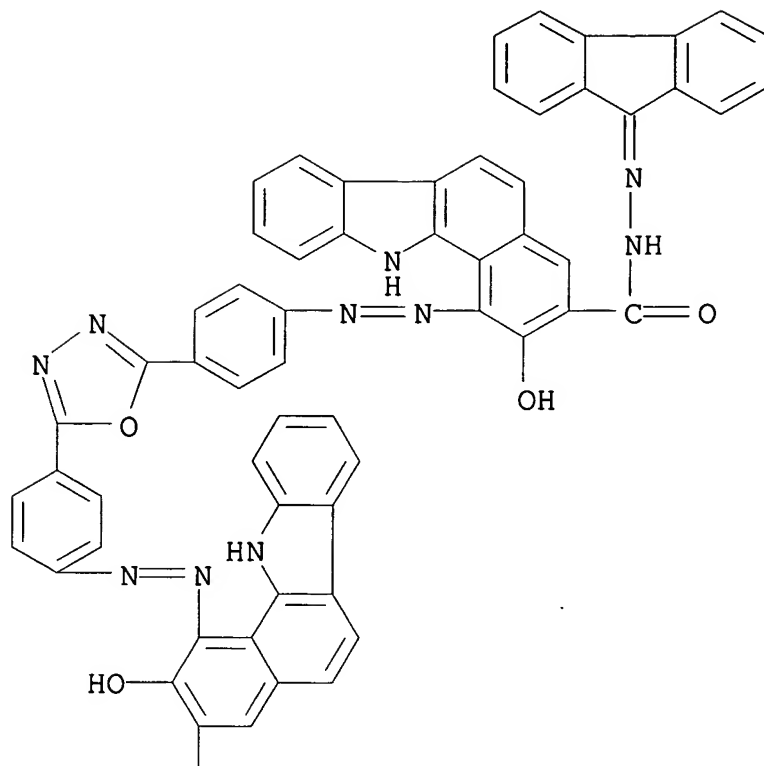


PAGE 2-A

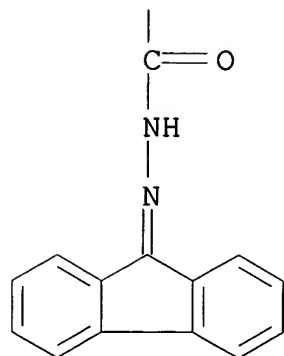


RN 100632-01-7 CAPLUS  
 CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1,1'-[1,3,4-oxadiazole-2,5-diylbis(4,1-phenyleneazo)]bis[2-hydroxy-, bis(9H-fluoren-9-ylidenehydrazide) (9CI) (CA INDEX NAME)

PAGE 1-A



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IC ICM G03G005-06

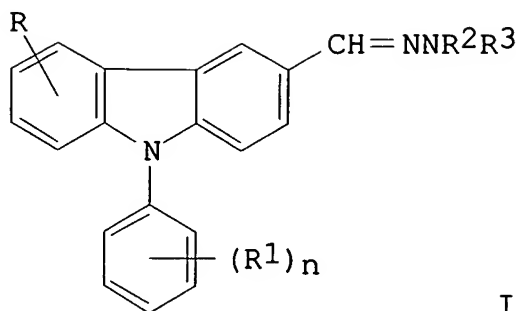
USHA SHRESTHA REM 4B28

ICS G03G005-04  
ICA C09B035-021; H01L031-08  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
Section cross-reference(s): 72  
IT 100465-81-4 100584-63-2 100584-64-3 100584-65-4  
100584-66-5 100584-67-6 100584-68-7 100584-69-8  
100584-70-1 100584-71-2 100584-72-3 100584-73-4  
100584-74-5 100584-75-6 100584-76-7 100584-77-8  
**100584-78-9** 100631-96-7 100631-97-8 100631-98-9  
100631-99-0 100632-00-6 **100632-01-7**  
(electrophotog. charge carrier-generating pigment)

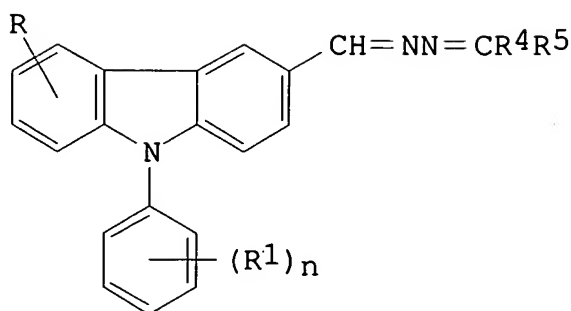
L12 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1985:140804 CAPLUS  
DOCUMENT NUMBER: 102:140804  
TITLE: Photosensitive material for electrophotography  
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 59195660	A2	19841106	JP 1983-69204	1983 0421
PRIORITY APPLN. INFO.: JP 1983-69204				1983 0421

GI



I



II

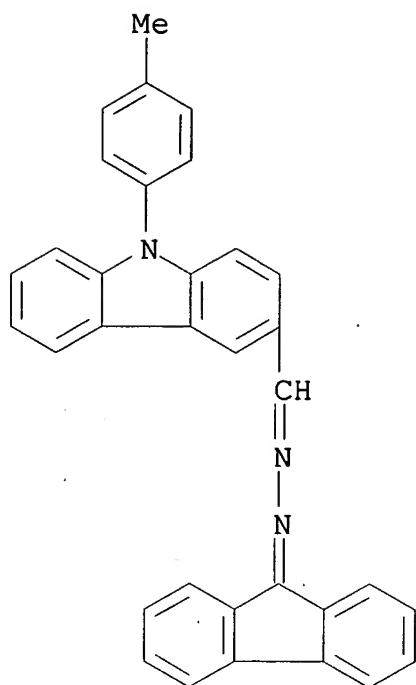
AB A photosensitive material for electrophotog. is described, whose conductive support has a photosensitive layer containing  $\geq 1$  carbazole deriv(s). I and/or II, where R, R1 = H, alkyl, alkoxy, halo, dialkylamino-, acyl, CN; R2, R5 = alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl (excluding R3 and R4 being alkyl); R4, R5 = alkyl, aralkyl, or substituted or unsubstituted aryl; R4 and/or R5 is substituted or unsubstituted aryl; R4 and R5 may form a ring or be heteroatoms for forming a heterocyclic ring; and n = 1 or 2. Thus, an Al-deposited polyester base was coated with a composition containing

C. I. Pigment Blue 25, and Vylon 200 polyester to form a charge-generation layer and then with a composition containing I, where R,  
R1 = H; R2 = Me; R3 = Ph, and n = 1, and Panlite K 1300 to form a charge-transport layer.

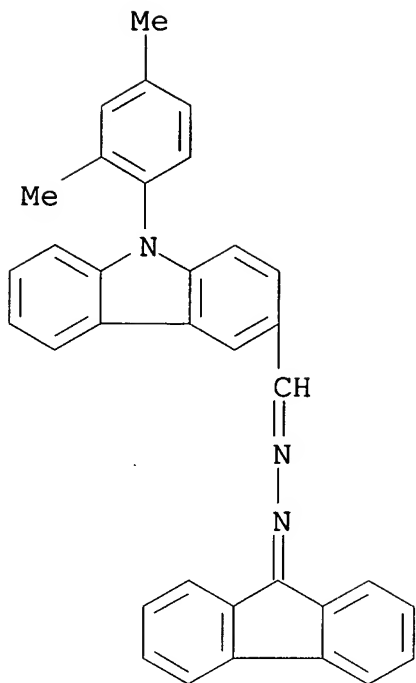
IT **95459-26-0 95459-37-3**  
(electrophotog. photoreceptor with charge transport layer containing)

RN 95459-26-0 CAPLUS

CN 9H-Carbazole-3-carboxaldehyde, 9-(4-methylphenyl)-,  
9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



RN 95459-37-3 CAPLUS  
 CN 9H-Carbazole-3-carboxaldehyde, 9-(2,4-dimethylphenyl)-,  
 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



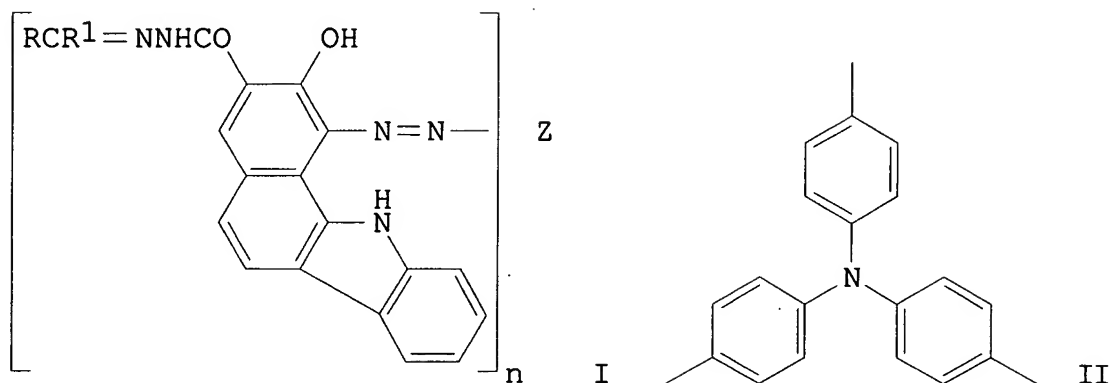
IC G03G005-06; H01L031-08  
ICA C07D209-86; C07D209-88; C07D403-12; C07D417-12  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT 75232-44-9 90266-72-1 90266-76-5 90266-77-6  
**95459-26-0** 95459-27-1 95459-28-2 95459-29-3  
95459-30-6 95459-31-7 95459-32-8 95459-33-9 95459-34-0  
95459-35-1 95459-36-2 **95459-37-3** 95459-38-4  
95459-39-5 95459-40-8 95459-41-9  
(electrophotog. photoreceptor with charge transport layer  
containing)

L12 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1985:123081 CAPLUS  
DOCUMENT NUMBER: 102:123081  
TITLE: Electrophotographic photosensitive materials  
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 59197043	A2	19841108	JP 1983-71114	1983 0422
JP 04052461	B4	19920821	JP 1983-71114	1983 0422
PRIORITY APPLN. INFO.:				

GI



AB Electrophotog. photosensitive materials contain azo dye I (Z = aromatic or heterocyclic moiety; R = H, lower alkyl, aryl, heterocycle; R1 = aryl, heterocycle; R, R1 in combination may complete a ring; n = 1, 2, 3). The electrophotog. materials exhibit good sensitivity and flexibility. Thus, an Al-laminated polyester film support was coated with a composition containing I (Z = II;

R = H; R1 = 2-nitrophenyl), and coated with a composition containing 9-(4-diethylaminostyryl)anthracene and a polycarbonate resin to give a composite electrophotog. plate with excellent sensitivity.

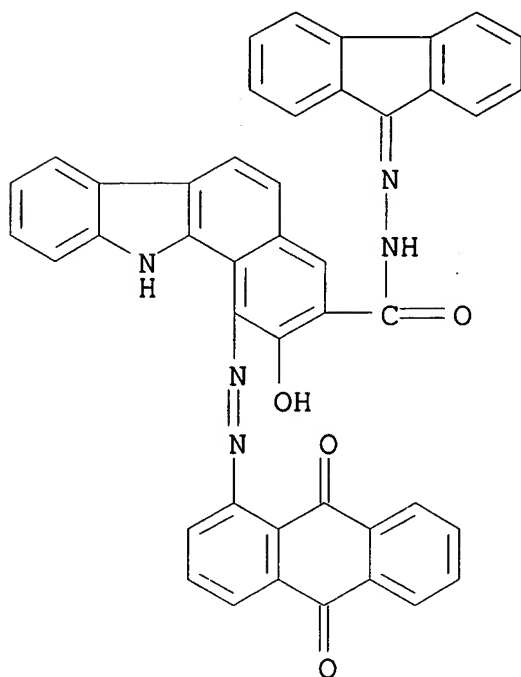
IT **95378-71-5**  
(electrophotog. charge-generating pigment)

RN 95378-71-5 CAPLUS

CN 11H-Benzo[a]carbazole-3-carboxylic acid, 1-[(9,10-dihydro-9,10-dioxo-1-anthracenyl)azo]-2-hydroxy-, 9H-fluoren-9-ylidenehydrazide



(9CI) (CA INDEX NAME)



IC G03G005-06; C09B035-34; H01L031-08  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 94531-55-2 94717-38-1 94717-39-2 94717-43-8 95378-56-6  
 95378-57-7 95378-58-8 95378-59-9 95378-60-2 95378-61-3  
 95378-62-4 95378-63-5 95378-64-6 95378-65-7 95378-66-8  
 95378-67-9 95378-68-0 95378-69-1 95378-70-4

**95378-71-5**

(electrophotog. charge-generating pigment)

L12 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1985:123079 CAPLUS  
 DOCUMENT NUMBER: 102:123079  
 TITLE: Photosensitive material for electrophotography  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

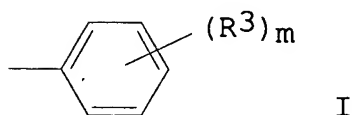
USHA SHRESTHA REM 4B28

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 59195659	A2	19841106	JP 1983-69203	1983 0421
JP 04055299	B4	19920902	JP 1983-69203	1983 0421

PRIORITY APPLN. INFO.:

GI



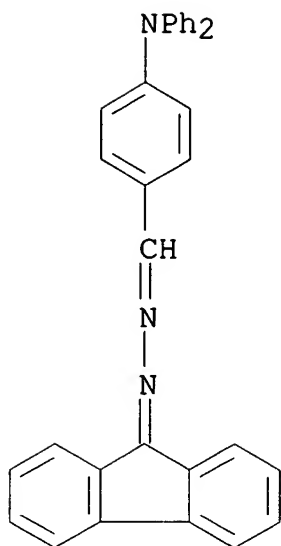
AB A photosensitive material for electrophotog. is described, whose conductive support has a photosensitive layer containing  $\geq 1$  azine compds.  $R_1R_2C:NN:CH(CH:CH)_nR$ , where  $R_1, R_2$  = alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl; however,  $R_1$  and/or  $R_2$  is substituted or unsubstituted alkyl; optionally,  $R_1$  and  $R_2$  may combine to form a ring;  $n = 0, 1$ ;  $R$  = substituted or unsubstituted naphthyl or I;  $R_3 = H$ , alkyl, alkoxy, halogen, or  $NR_4R_5$ ;  $R_4, R_5$  = alkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aryl; and  $m = 1, 2, 3$ . Thus, an Al-deposited polyester base was coated with a composition containing C. I. Pigment Blue 25, and Vylon 200 polyester to form a charge-generation layer and then with a composition containing benzophenone-4-N,N-diethylaminobenzaldehydrazine, and Panlite K 1300 to form a charge-transport layer.

IT **87695-85-0**

(electrophotog. photoreceptor with charge-generating layer containing, azine compds. for charge-transport layers of)

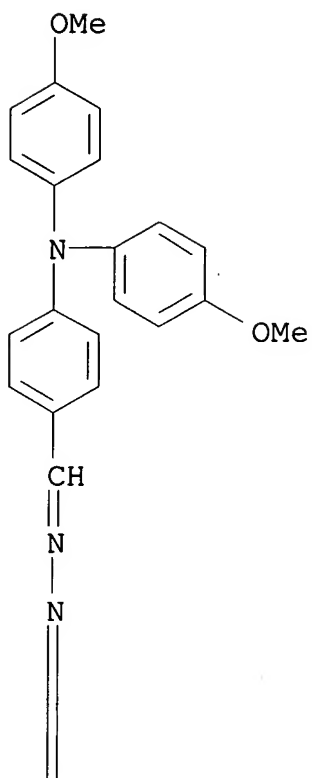
RN 87695-85-0 CAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)

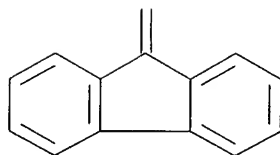


IT **95459-24-8 95459-25-9**  
 (electrophotog. photoreceptor with charge-transport layer  
 containing)  
 RN 95459-24-8 CAPLUS  
 CN Benzaldehyde, 4-[bis(4-methoxyphenyl)amino]-, 9H-fluoren-9-  
 ylidenehydrazone (9CI) (CA INDEX NAME)

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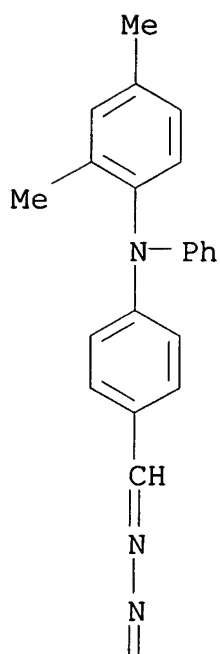


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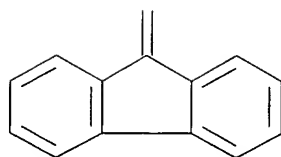


RN 95459-25-9 CAPLUS  
 CN Benzaldehyde, 4-[(2,4-dimethylphenyl)phenylamino]-,  
 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)

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IC G03G005-06; H01L031-08  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
 IT 5521-31-3 10127-03-4 41709-76-6 69474-96-0 69534-94-7  
 70621-09-9 82829-36-5 **87695-85-0**  
 (electrophotog. photoreceptor with charge-generating layer  
 containing, azine compds. for charge-transport layers of)

USHA SHRESTHA REM 4B28

IT 95459-00-0 95459-01-1 95459-02-2 95459-03-3 95459-04-4  
 95459-05-5 95459-06-6 95459-07-7 95459-08-8 95459-09-9  
 95459-10-2 95459-11-3 95459-12-4 95459-13-5 95459-14-6  
 95459-15-7 95459-16-8 95459-17-9 95459-18-0 95459-19-1  
 95459-20-4 95459-21-5 95459-22-6 95459-23-7

**95459-24-8 95459-25-9**

(electrophotog. photoreceptor with charge-transport layer containing)

L12 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:619717 CAPLUS

DOCUMENT NUMBER: 101:219717

TITLE: Electrophotographic photosensitive materials

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58105234	A2	19830623	JP 1981-203669	1981 1218

PRIORITY APPLN. INFO.: JP 1981-203669

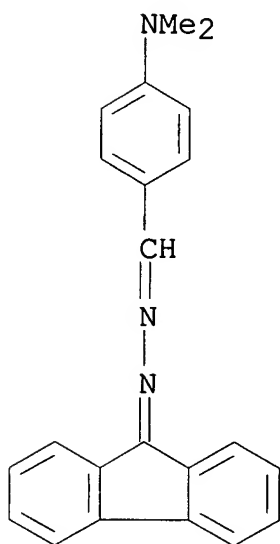
1981  
1218

AB Electrophotog. plates have an organic photoconductor layer containing a

charge carrier-transport agent having an ionization potential of  $\alpha$  (eV) and a protective layer containing a charge carrier-transport agent with an ionization potential  $\leq \alpha + 0.5$  (eV). The electrophotog. plates exhibit excellent durability and sensitivity. Thus, an Al-laminated polyester film support was coated with S-Lec MF-10 (maleic anhydride-vinyl acetate-vinyl chloride copolymer), then coated with a composition containing 4,10-dibromoanthanthrone and Panlite L-1250, then coated with a composition containing 3-(4-methoxystyryl)-9-(4-methoxyphenyl)carbazole ( $\alpha = 6.56$  eV) and Panlite L-1250, and finally coated with a composition containing Acrylic A-851 (an

acrylpolyol resin), Coronate 2080 (a polyisocyanate), and 3-(4-methylstyryl)-9-(4-methoxyphenyl)carbazole (ionization potential of 6.61 eV) to give an electrophotog. film having good mech. strength and sensitivity.

IT **75159-08-9**  
 (electrophotog. composite photoreceptor with protective layer containing charge carrier-transport agent from)  
 RN 75159-08-9 CAPLUS  
 CN Benzaldehyde, 4-(dimethylamino)-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)



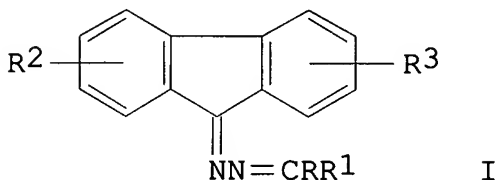
IC G03G005-14; G03G005-04  
 CC 74-3 (Radiation Chemistry, **Photochemistry**, and **Photographic** and Other Reprographic Processes)  
 IT 3746-21-2 15008-36-3 53338-84-4 68189-23-1 69183-96-6  
 71900-81-7 **75159-08-9** 83317-76-4 84285-21-2  
 87667-05-8 88515-69-9 92633-74-4 93109-03-6  
 (electrophotog. composite photoreceptor with protective layer containing charge carrier-transport agent from)

L12 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1983:622336 CAPLUS  
 DOCUMENT NUMBER: 99:222336  
 TITLE: Composite electrophotographic plates  
 PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 Japanese  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 57138644	A2	19820827	JP 1981-24078	1981 0219
JP 60058469	B4	19851220		
US 4415640	A	19831115	US 1982-350039	1982 0218
PRIORITY APPLN. INFO.:			JP 1981-24078	A 1981 0219

GI



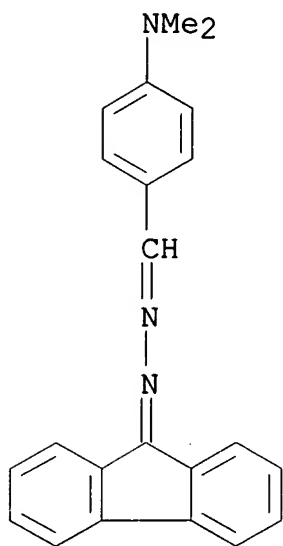
AB: Electrophotog. photosensitive materials contain charge-transfer agent of the formula I (R = aryl; R1 = H, alkyl, aryl; R2, R3 = H, halo, alkoxy, alkyl, amino, NO2, CN). Thus, an Al-laminated polyester film support was coated with dibromoanthrone (by vacuum deposition), then coated with a composition containing I (R = R2 = R3 = H; R1 = 4-Et2NC6H4) and Vylon 200 to give a composite electrophotog. plate having excellent sensitivity and electrostatic contrast.

IT **75159-08-9 87695-81-6 87695-82-7**  
**87695-83-8 87695-85-0 87695-86-1**  
**87695-87-2**  
 (electrophotog. charge-transfer agent)



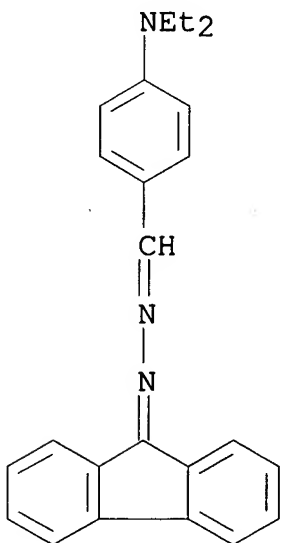
RN 75159-08-9 CAPLUS

CN Benzaldehyde, 4-(dimethylamino)-, 9H-fluoren-9-ylidenehydrazone  
(9CI) (CA INDEX NAME)



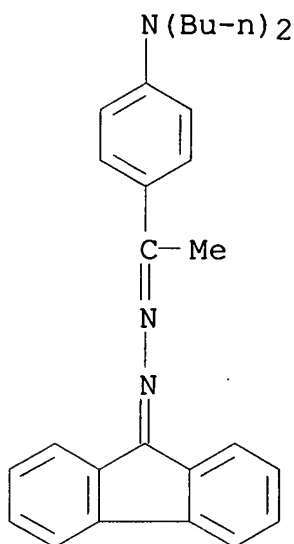
RN 87695-81-6 CAPLUS

CN Benzaldehyde, 4-(diethylamino)-, 9H-fluoren-9-ylidenehydrazone  
(9CI) (CA INDEX NAME)



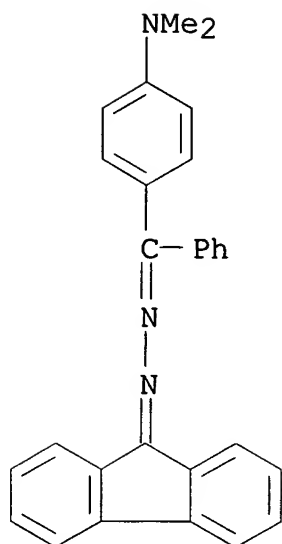
RN 87695-82-7 CAPLUS

CN 9H-Fluoren-9-one, [1-[4-(dibutylamino)phenyl]ethylidene]hydrazone  
(9CI) (CA INDEX NAME)

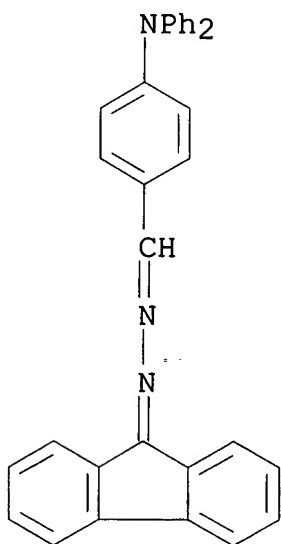


RN 87695-83-8 CAPLUS

CN 9H-Fluoren-9-one, [[4-(dimethylamino)phenyl]phenylmethylene]hydraz-  
one (9CI) (CA INDEX NAME)

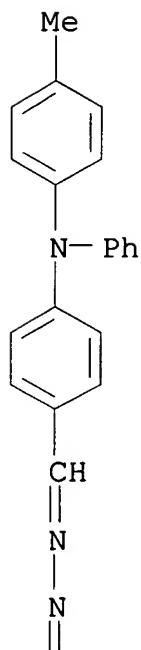


RN 87695-85-0 CAPLUS  
 CN Benzaldehyde, 4-(diphenylamino)-, 9H-fluoren-9-ylidenehydrazide  
 (9CI) (CA INDEX NAME)

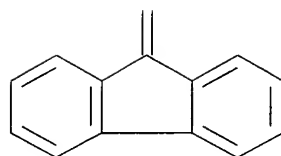


RN 87695-86-1 CAPLUS  
 CN Benzaldehyde, 4-[(4-methylphenyl)phenylamino]-,  
 9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX NAME)

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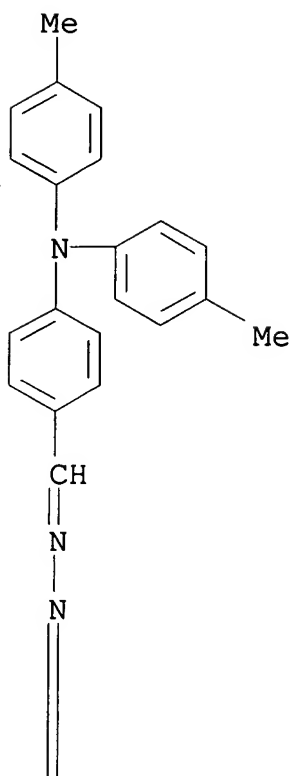


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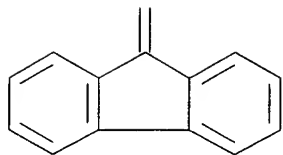


RN 87695-87-2 CAPLUS  
 CN Benzaldehyde, 4-[bis(4-methylphenyl)amino]-, 9H-fluoren-9-ylidenehydrazone (9CI) (CA INDEX NAME)

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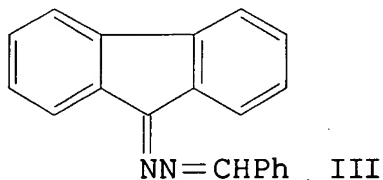
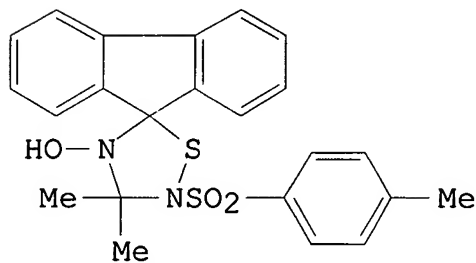
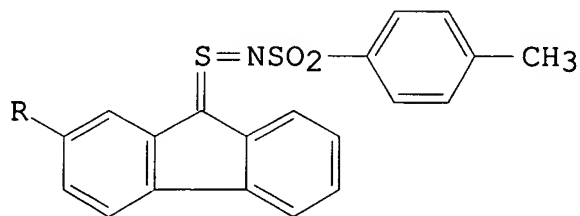
IC G03G005-04; G03G005-06  
ICA C08K005-22; C09B026-02  
CC 74-3 (Radiation Chemistry, **Photochemistry**, and  
**Photographic** and Other Reprographic Processes)  
IT **75159-08-9 87695-81-6 87695-82-7**  
**87695-83-8 87695-84-9 87695-85-0**  
**87695-86-1 87695-87-2 87695-88-3**

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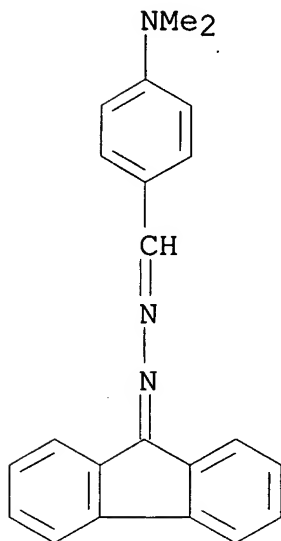
(electrophotog. charge-transfer agent)

L12 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1980:568192 CAPLUS  
 DOCUMENT NUMBER: 93:168192  
 TITLE: Thione S-imides. The reaction with carbon-hetero atom double bond  
 AUTHOR(S): Saito, Takao; Oikawa, Isao; Motoki, Shinichi  
 CORPORATE SOURCE: Fac. Sci., Univ. Tokyo, Tokyo, 162, Japan  
 SOURCE: Bulletin of the Chemical Society of Japan (1980), 53(4), 1023-7  
 CODEN: BCSJA8; ISSN: 0009-2673  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 93:168192  
 GI



AB 9-Fluorenethione S-p-toluenesulfonimide I (R = H, NO<sub>2</sub>) reacted as a 1,3-dipole with imines, oximes, and thiones to form (3+2)cycloadducts, while with sym. azines and aldehydes, unsym. azines, N-(p-tolylsulfonyl) imines and fluorenone were obtained as a result of the decomposition of the cycloadducts. Thus, treating I (R = H) with Me<sub>2</sub>C:NOH gave spirothiadiazole II, whereas use of PhCH:NN:CHPh gave PhCH:NO<sub>2</sub>SC<sub>6</sub>H<sub>4</sub>Me-4 and III.

IT **75159-08-9P**  
 (preparation of)  
 RN 75159-08-9 CAPLUS  
 CN Benzaldehyde, 4-(dimethylamino)-, 9H-fluoren-9-ylidenehydrazone  
 (9CI) (CA INDEX NAME)



CC 28-11 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT 486-25-9P 13707-41-0P 17529-01-0P 75158-86-0P 75158-87-1P  
 75158-88-2P 75158-89-3P 75158-90-6P 75158-91-7P  
 75158-92-8P 75158-93-9P 75158-95-1P 75158-97-3P  
 75158-98-4P 75158-99-5P 75159-00-1P 75159-01-2P  
 75159-02-3P 75159-03-4P 75159-04-5P 75159-05-6P  
 75159-06-7P 75159-07-8P **75159-08-9P** 75159-09-0P  
 75159-10-3P 75159-11-4P 75159-12-5P 75159-13-6P  
 75159-14-7P 75174-36-6P  
 (preparation of)

L12 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1974:47897 CAPLUS  
 DOCUMENT NUMBER: 80:47897  
 TITLE: Synthesis of 2-pyrazoline-4-dithiocarbonic acids  
 AUTHOR(S): Auzzi, G.; Papini, P.  
 CORPORATE SOURCE: Ist. Chim. Farm. Tossicol., Univ. Fiernze, Florence, Italy  
 SOURCE: Bollettino Chimico Farmaceutico (1973),

112(8), 521-8

CODEN: BCFAAI; ISSN: 0006-6648

DOCUMENT TYPE:

Journal

LANGUAGE:

Italian

GI For diagram(s), see printed CA Issue.

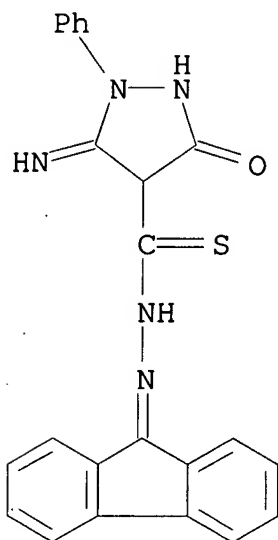
AB The hydrazides I (R = H, Ph; R1 = NH2, NHAc, NHPH, OH; R2 = R3 = H; R2R3 = CMe2, CMePh, CHC6H4Cl-4, CHC6H3Cl2-2,6, CHC6H4NO2-2, CHC6H4OMe-4, CHC6H3(OH)2-2,3, piperonylidene, 2-bornylidene, CMeC6H4-NH2-p, 9-fluorenylidene, 2-methylcyclohexylidene; X = O, NH) were prepared by treating the corresponding dithiocarboxylic acids with the hydrazine derivs. The thiadiazoles II (R = H, R1 = NHAc, X = O; R = Ph, R1 = OH, X = NH) were obtained by cyclizing the corresponding I (R = R2 = R3 = H). I had lower antibacterial activity than the starting dithoacids.

IT **51313-44-1P**

(preparation of)

RN 51313-44-1 CAPLUS

CN 4-Pyrazolidinecarbothioic acid, 5-imino-3-oxo-1-phenyl-,  
9H-fluoren-9-ylidenehydrazide (9CI) (CA INDEX NAME)



CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

IT	51244-60-1P	51244-61-2P	51244-62-3P	51244-63-4P
	51244-64-5P	51244-65-6P	51244-66-7P	51244-67-8P
	51244-68-9P	51244-69-0P	51244-70-3P	51244-71-4P
	51244-72-5P	51244-73-6P	51244-74-7P	51244-75-8P
	51244-76-9P	51244-77-0P	51244-78-1P	51244-79-2P



51244-80-5P    51244-81-6P    51244-82-7P    51244-83-8P  
51244-84-9P    51244-85-0P    51313-43-0P    **51313-44-1P**  
                  (preparation of)